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F-105 THUNDERCHIEF in Action

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AIRCRAFT NO. SEVENTEEN

Lou Drendel
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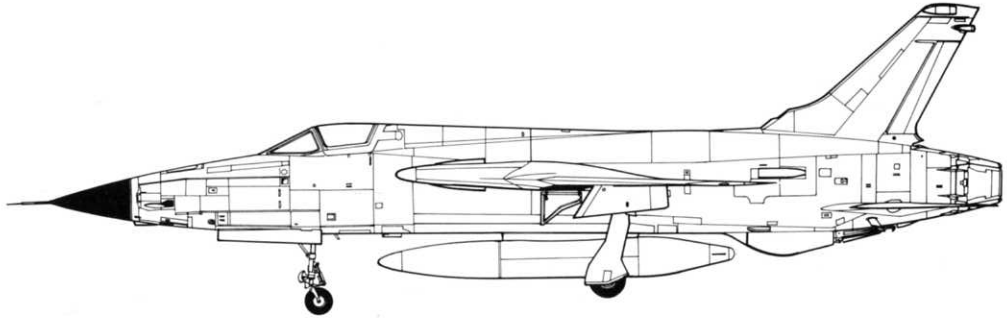
F-105 THUNDERCHIEF in Action



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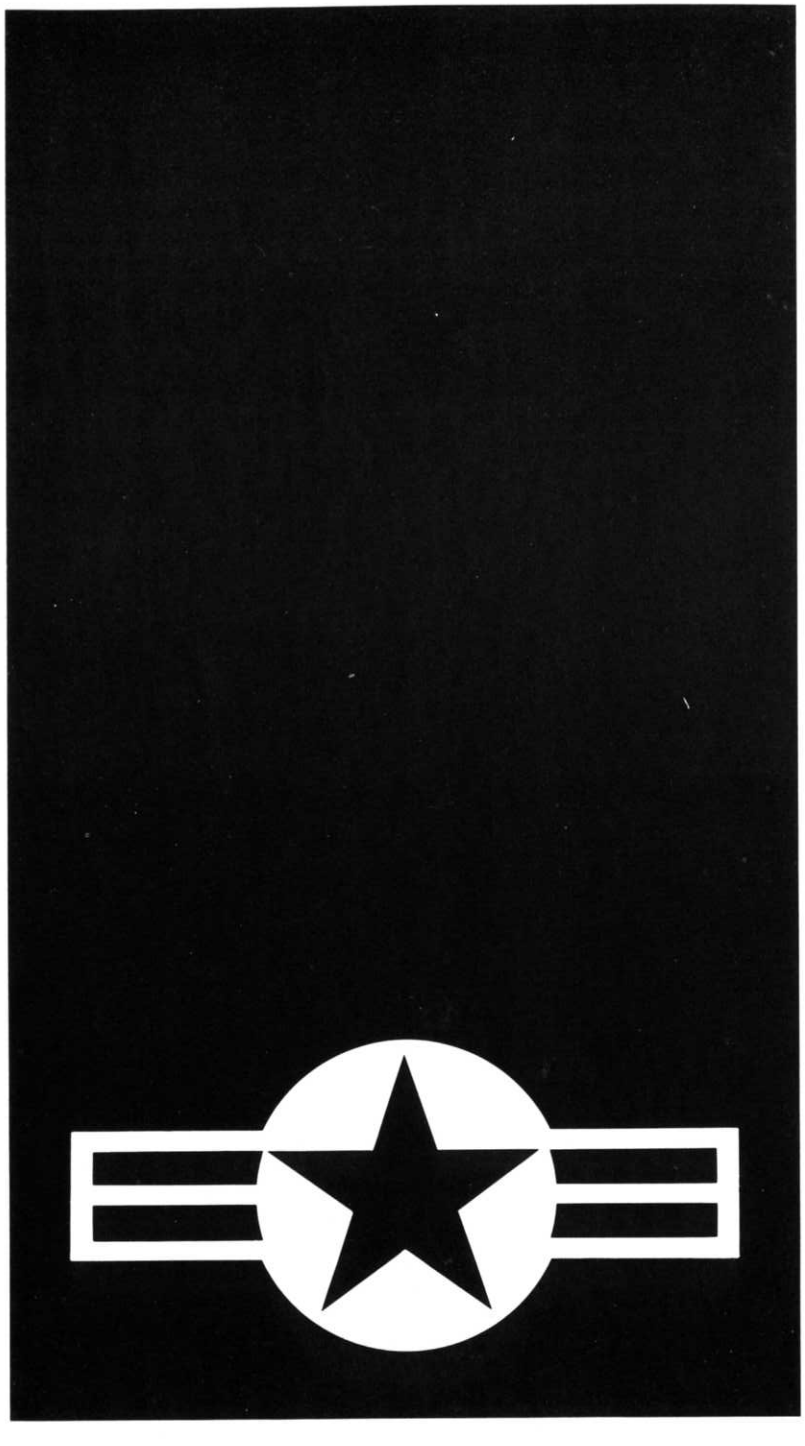

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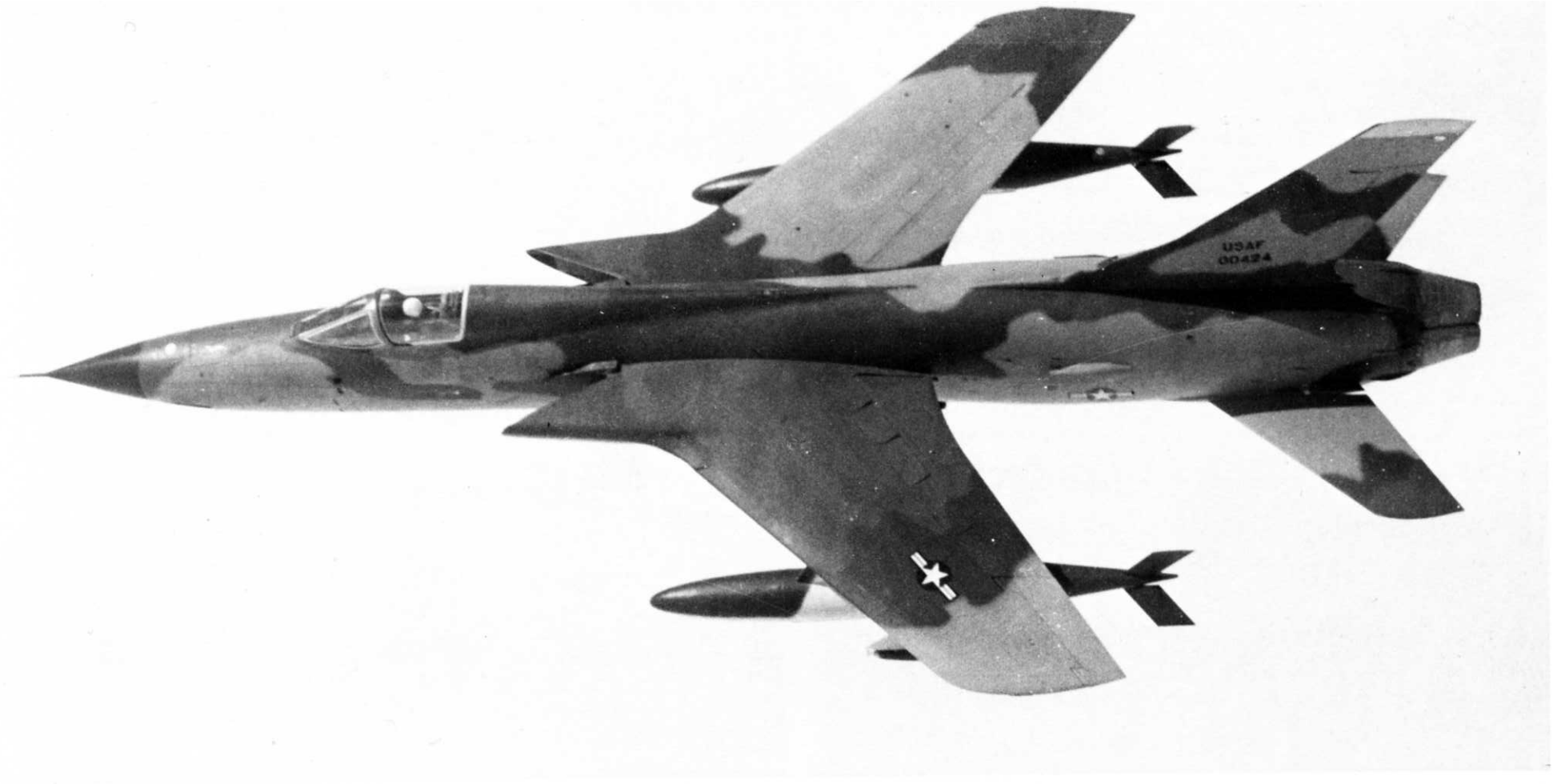


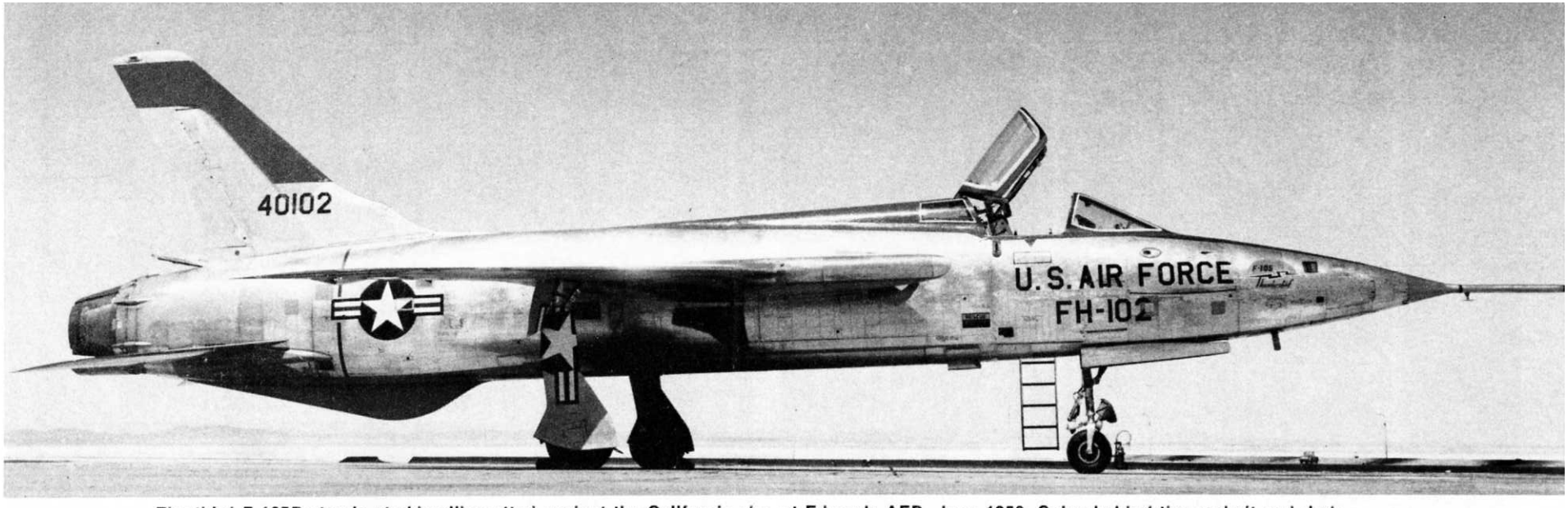
Introduction . . .

It is said that there is nothing so irresistible as an idea whose time has come. When the **F-105 "Thunderchief"** entered service, it was the embodiment of an idea whose time had not quite come. As such, it struggled through the early years of it's career bearing such ignoble labels as "Lead Sled", "Ultra-Hog", and "Thunderthud".

The Thunderchief was conceived in the era when national defense policy demanded specialized aircraft for specialized missions. It was a highly specialized specimen whose production lines fell victim to the idealistic (and nearly disastrous) concept of "commonality" in defense spending which accompanied a new administration, and a new defense policy. Ironically, the very defense policy which spawned commonality also proved the folly of it, and vindicated the specialization of the Thunderchief design, though not before the F-105 production run had ended at 833. As the production lines were closing, in 1964, events halfway around the world were sounding the clarion call for the F-105's combat debut. The Thunderchief, which entered service as the biggest, fastest, low level nuclear strike bomber ever to see the light of day, would earn respectability hauling iron bombs deep into North Vietnam.

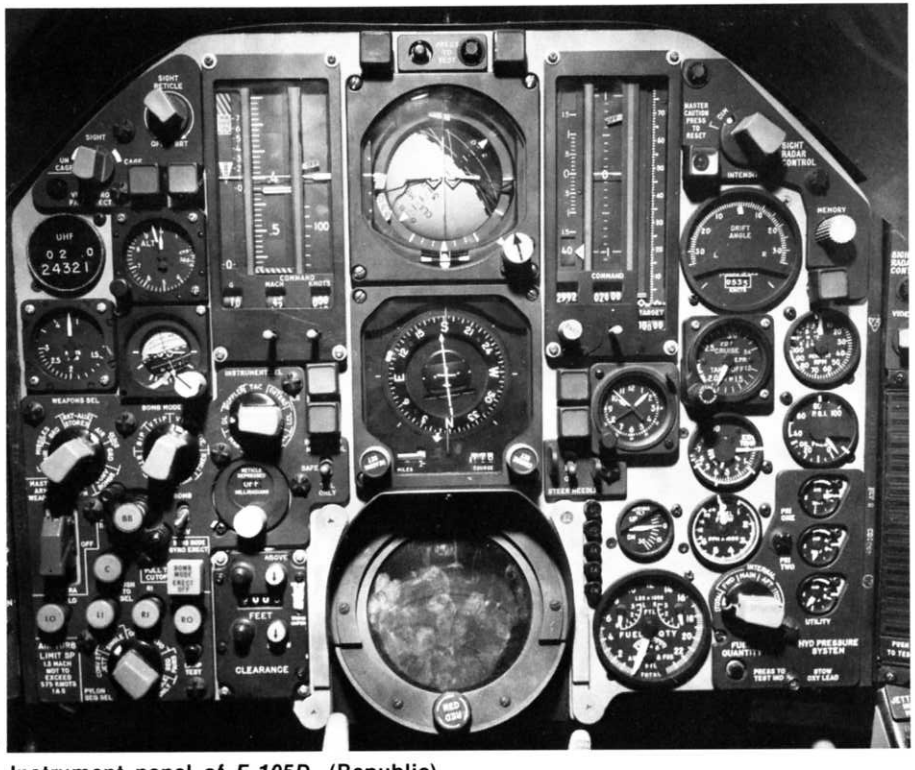
The first *Thunderchief*, the *YF-105A*, taxies out for a test flight at Edwards AFB, 31 October, 1955. Note the "straight" air intakes. (USAF)

The second *YF-105A* on the ground at Edwards AFB in May 1956. (above) First two *F-105B's* (left and below) The "B" models incorporated many advancements in existing "state-of-the-art" aircraft design, including the area ruled fuselage, and the J-75-P-3 Engine. Also introduced with the *"B"* were the swept-forward intakes, which help in directing a constant flow of air to the engine over a wide range of speeds. (USAF)

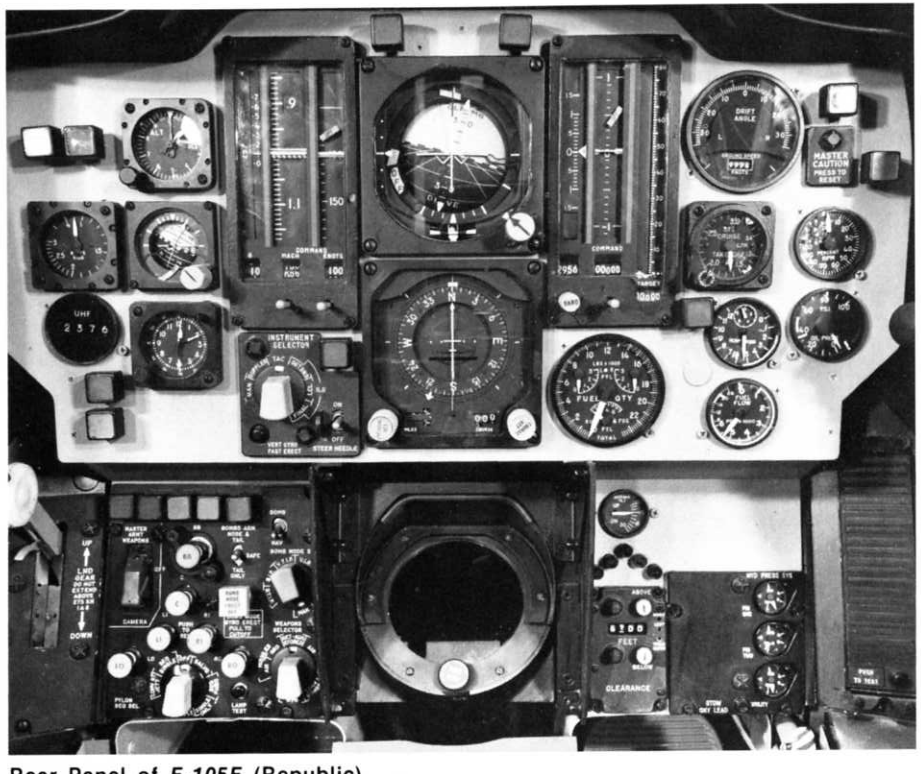


The third *F-105B* stands starkly silhouetted against the California sky, at Edwards AFB, June 1958. Spine behind the cockpit and dark area on vertical fin were bright orange. (USAF)

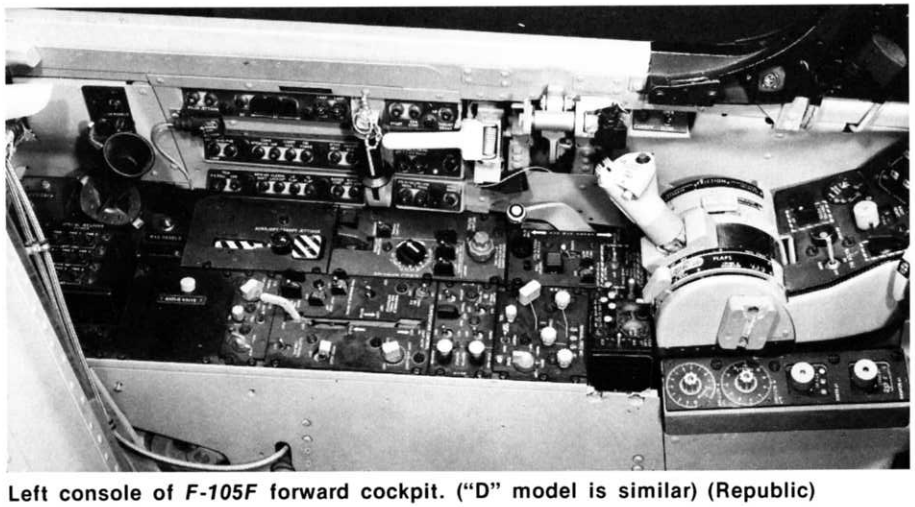
Thunderchiefs on the production lines at Republic's Farmingdale plant.



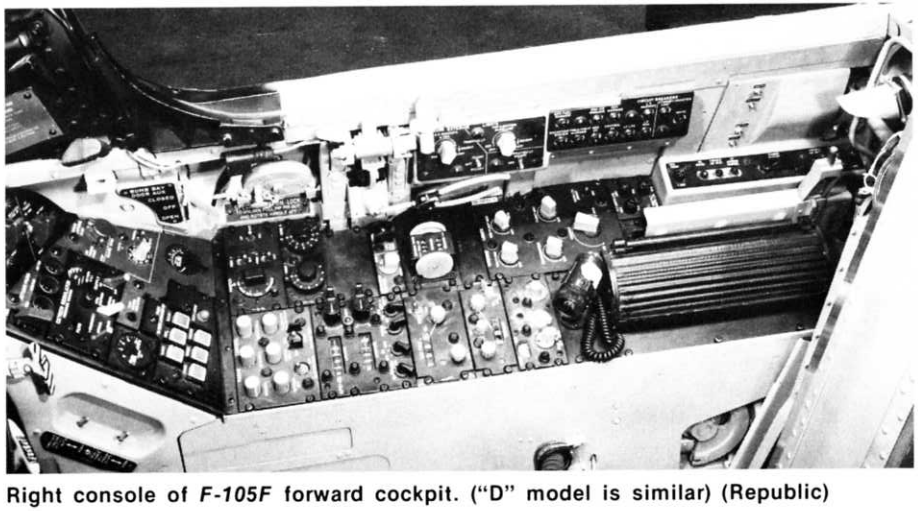
Instrument panel of *F-105D.* (Republic)



Rear Panel of *F-105F* (Republic)



Left console of *F-105F* forward cockpit. ("D" model is similar) (Republic)



Right console of *F-105F* forward cockpit. ("D" model is similar) (Republic)

Thunderchief genealogy . . .

The **F-105 Thunderchief** began life on the drawing boards of Farmingdale as a desire to improve upon the performance of the F-84F Thunderstreak, itself a growth version of the F-84 Thunderjet. But the creative genius of Kartveli and company germinated the "improvement" program into an all-new design, a design whose merits convinced Republic Aviation that they had something worth pursuing as a private venture. The embryo design, then known in company parlance as Advanced Project 63, was submitted to the Department of Defense in March of 1952. The DOD liked what they saw and in the fall of 1952 a contract for tooling and engineering was awarded to Republic.

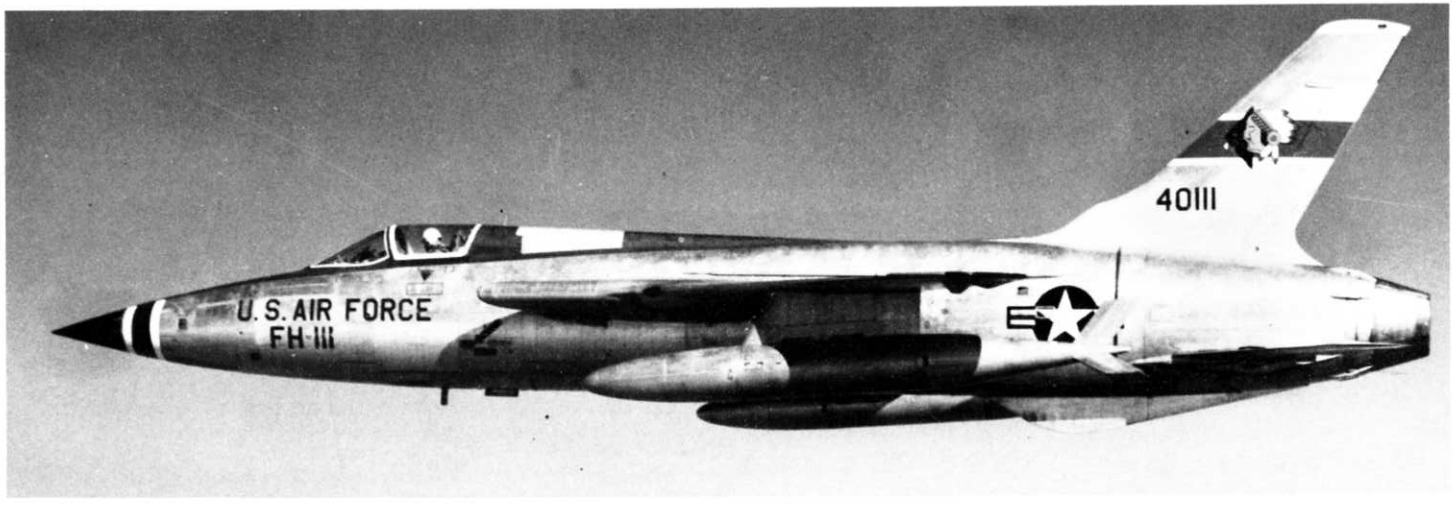
If the initial favorable reaction of DOD had encouraged Republic to think that they had a relatively smooth road ahead for their new design, subsequent events would change their outlook considerably. A month after contract award, the DOD changed their engine specification from the **Allison J-71,** to the **Pratt & Whitney J-57.** In March of 1953, Republic was given an order for 37 **XF-105A0's.** In July of 1953, the Armistice was signed in Korea. DOD had second thoughts about the urgency of the **105** program, and about the mission envisioned for the new airplane. The probability, indeed the efficacy, of conventional land warfare was in serious doubt. The new defense policy of the Eisenhower Administration called for the ability to make warfare by a potential aggressor dangerously unprofitable. To that end, a large, and mobile nuclear retaliation force was to be built as a shield for the free world. If the F-105 didn't fit into the cogs of that machinery, then there was little use in going ahead with production. The designers at Republic got the message.

By October of 1953 they had a mock-up built. It was now a long-range, high speed bomber, capable of carrying a nuclear bomb in an internal bomb bay. Things looked rosy, and the Republic design team continued to incorporate the latest aerodynamic discoveries in their project. In February of 1954 the bottom fell out. DOD cut it's order from 37 to 15 airplanes. Numerous vacillations followed. **Pratt & Whitney J-75's** were specified in place of the **J-57's.** In September the order was cut to 3 airplanes. In October it was increased to six. In February of 1955, the order was again set at 15, with allowance for the original 37 incorporated in the fiscal 56' budget. But before Republic was allowed to go ahead with the full order, they were told that the F-105 would have to win a competitive evaluation against the North American F-107.

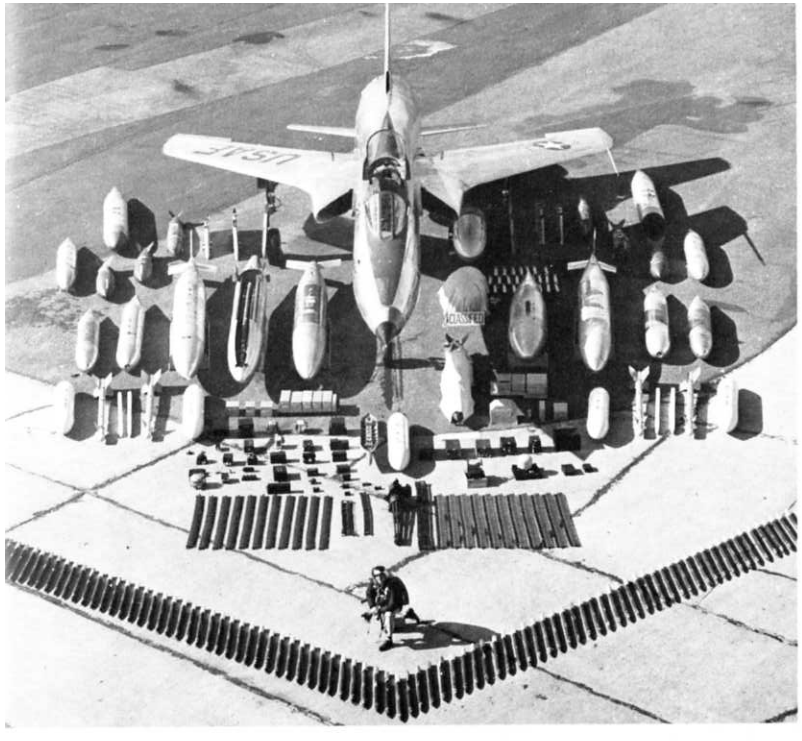
The **YF-105A,** which had first flown on October 22, 1955, won the competitive evaluations handily. Still DOD procrastinated, and the decision to put the Thunderchief into quantity production was delayed until January of 1957. The following October the first F-105's were delivered to operational units. Though it's trials and tribulations were far from over, the **Thunderchief** had finally won the chance to prove the foresight of it's designers and builders.

The following is an "Instant Guide" to F-105 variants:

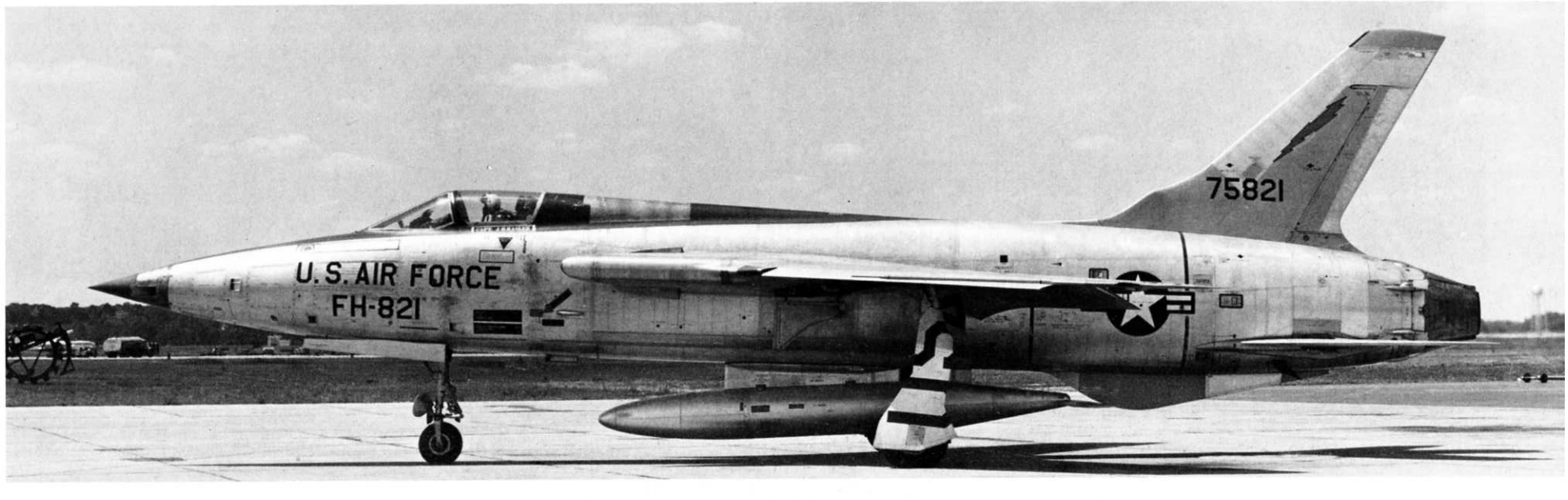
YF-105A-1-RE:	Two built, serial numbers 54-0098 & 99. First flown in October, 1955 by Republic test pilot R.M. Roth.
F-105B-1-RE:	Four built, serial numbers 54-100 through 103. First flight May 26, 1956. First model of the Thunderchief to incorporate ventral fin, swept forward air intakes, and area ruled fuselage.
F-105B-5-RE:	Five built, serials through 54-0110. (skipping serials 105 and 108.) Served as evaluation and test aircraft.
F-105B-6-RE:	One built, serial number 54-0111. This was the first Thunderchief delivered to an operational squadron, the 335th TFS, Eglin AFB, Florida, on May 26, 1958.
JF-105-1-RE:	Two built, serial numbers 54-0105 & 108. Initially planned as RF versions of the 105, they lost out to RF-101, and served as instructional airframes.
JF-105-2-RE:	One built, serial number 54-0112. Same remarks as above.
F-105B-10-RE:	Nine built, serial numbers 57-5776 to 84. Equipped the first combat squadron in the world (335th TFS) to have mach 2 strike aircraft.
F-105B-15-RE:	Eighteen built, serial numbers 57-5785 to 57-5802.
F-105B-20-RE:	Thirty-Eight built, serial numbers 57-5803 to 40.
F-105D-1-RE:	Three built, serial numbers 58-1146 to 48. First of what was to become the definitive version of the Thud, the "D" was the first all-weather attack version, and was equipped with the more powerful J-75-P-19W engine, which put out 26,000 lbs. thrust with afterburner and water injection. It was also equipped with a Doppler navigation system and the "Thunderstick" fire control system. First flight made in June, 1959. The "D" version was tested against the F-101, won the competition, and earned for Republic a never-to-be-completed order for 1,500 additional "D's".
F-105D-5-RE:	66 built, serials 58-1149 to 1173, 59-1717 to 1757.
F-105D-6-RE:	45 built, serials 59-1758 to 74, 59-1817 to 26, 60-0409 to 26.
F-105D-10-RE:	121 built, 60-0427 to 0535, 60-5374 to 85.
F-105D-15-RE:	66 built, serials 61-0041 to 106.
F-105D-20-RE:	55 built, serials 61-0107 to 61.
F-105D-25-RE:	80 built, serials 61-0162 to 220, 62-4217 to 37. This was the first model of the "D" series to be equipped with all of the conventional warfare modifications. All previous models were converted to -25 standard under project "Look Alike".
F-105D-30-RE:	39 built, serials 62-4238 to 76.
F-105D-31-RE:	135 built, serials 62-4277 to 4411.
F-105F-1-RE:	143 built, serials 62-4412 to 47, 63-8260 to 8366. The two seat version of the Thud, first offered the Air Force as the F-105C (modified "B"), and later as the F-105E. (modified "D") Both were turned down on the basis of expense, the "C" as a trainer, the "E" as an all-weather fighter-bomber. When the "F" was offered as a combination of the two, the Air Force accepted the proposal, cancelling the final 143 "D" models already on order, in favor of the "F". It made it's first flight July 11, 1963. Limited visibility precluded it's use as a trainer, and it won acclaim as the mainstay of the "Wild Weasel" ECM forces in Vietnam.

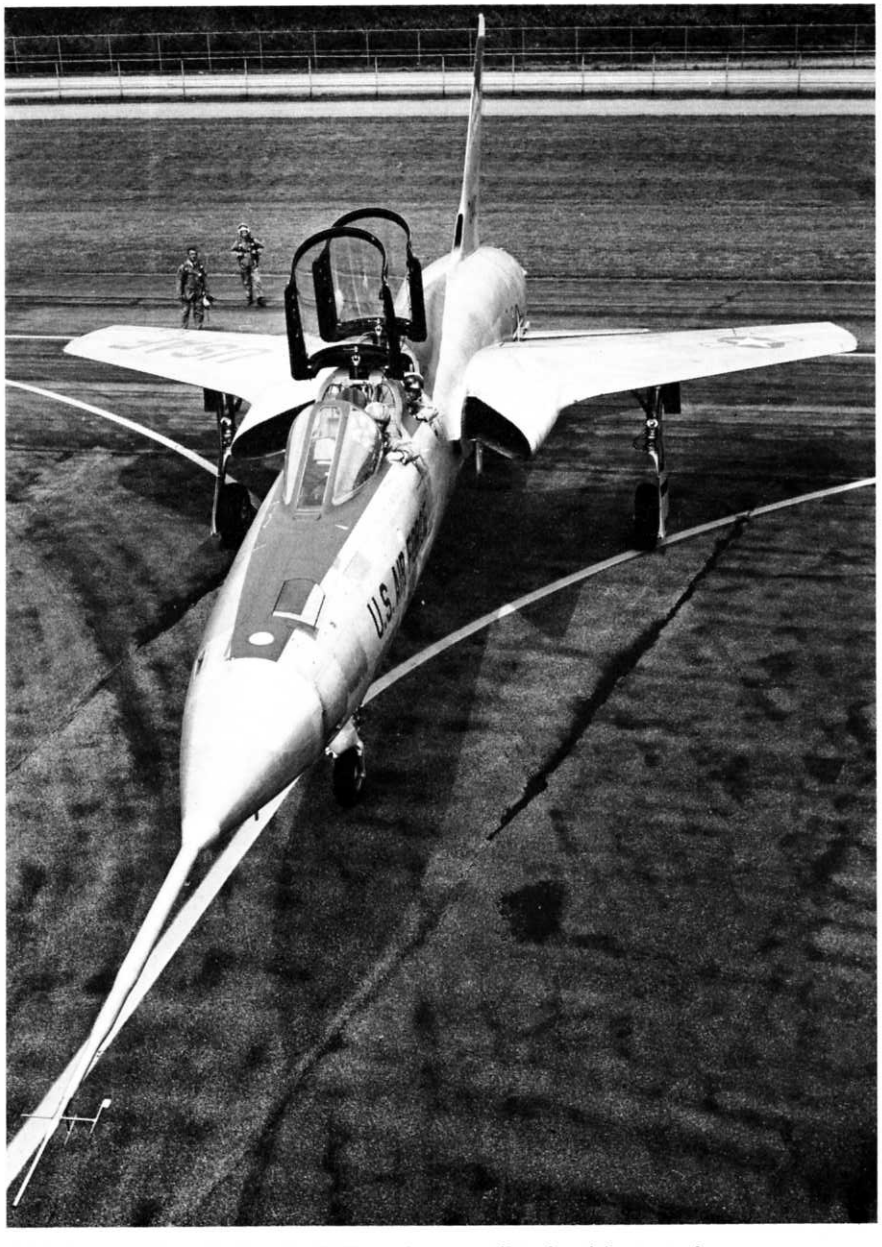


The alternate refueling equipment of the *Thud* are displayed above left, with probe and drogue at right. Most often used method was insertion of boom from tanker through slipway door (left) and into receptacle. Two views (above and left) of the first Thud to be delivered to an operational unit. Coincidentally, this was the only dash six variant of the 105B to be built. (USAF)



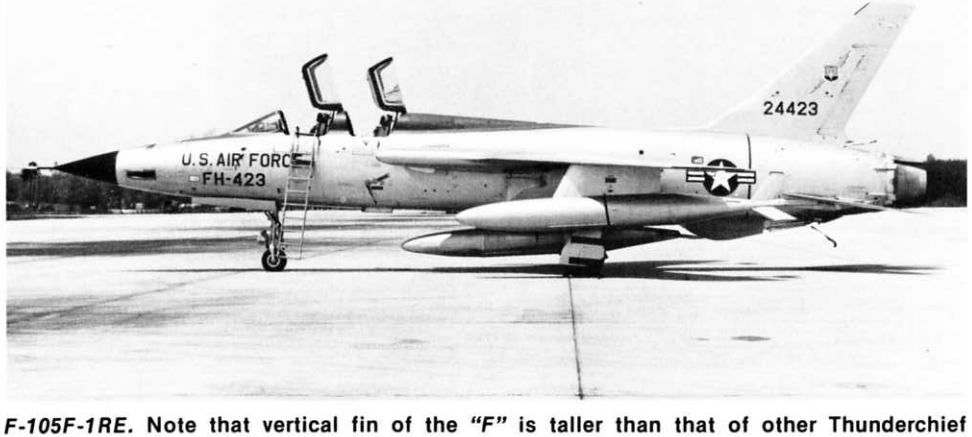
Early publicity shot of the *Thud,* demonstrating the weapons it is capable of delivering. Note menacing shape of "classified" weapon under cover at right. (left) *F-105B* of the New Jersey Air Guard, carrying *Dart* air-to-air gunnery target under left wing. Note whimsical instructions painted on target by ground crews. (R. Esposito via Norman E. Taylor) (above) *F-105B* of Capt. James Kasler. Kasler was later shot down over North Vietnam, and taken POW. (Peter Bowers collection)





Initial example of the *F-105F* series, outfitted with test boom on nose. (Republic)

F-105F-1RE of the 4520th CCTW, Nellis AFB, Nev. photographed at Webb AFB, Texas, May, 1965. (Norman E. Taylor)



F-105F-1RE. Note that vertical fin of the *"F"* is taller than that of other Thunderchief variants. (Norman E. Taylor)

Loading practice bombs on an *F-105D-15-RE*, at Seymour Johnson AFB.

F-105D-5-RE, carrying 750lb. bombs and rocket pods. Note that the arresting hook has not been installed, and it still sports the natural metal finish typical of pre "Operation Look-Alike" Thunderchiefs. (Republic)

F-105D-10-RE of the 36th TFW, at Bitburg AB, Germany. (David W. Menard via Norman E. Taylor)

The THUD in combat . . .

The **F-105** was one of the first U.S. combat aircraft to see action in the Vietnamese Air War. It was destined to become the foremost fighter-bomber of that war, flying the majority of the missions, and carrying the majority of tonnage of bombs deep into North Vietnam.

The North Vietnamese air defenses were the most formidable defenses in the history of aerial warfare. The reasons for this were twofold. The defenses themselves were complex and numerous, and United States strategy was one of "gradualism", an increment by increment application of pressure, wherein the enemy was able to anticipate and prepare for the next blow. There can be little doubt that the United States had the power to completely devastate and defeat the North Vietnamese within a matter of weeks, if that had been the objective. But United States policy dictated a "test of wills" type of strategy, in which it was hoped that North Vietnam could be dissuaded from continuing aggression against neighboring Southeast Asian nations.

Faced with a restrictive strategy, the United States military was forced into "tough-it-out" tactics. They would take out their assigned targets, regardless of the defenses, regardless of the cost. They would go back, day after day, if necessary, to those targets, and nothing the enemy could do would stop them.

The **F-105,** able to carry greater bomb loads greater distances at higher speeds than any other fighter bomber in the inventory, able to withstand tremendous punishment and still return, and able (to it's critics astonishment) to attain operational readiness rates in excess of 90%, even while flying up to 60 combat hours per month, became the pivotal factor in these tactics.

The feats performed by the Thud Drivers on those missions "into the barrel" from 1965 to 1968 are more than ledgendary. They set a standard for future generations of American fighter pilots to live up to, a standard of courage and determination that complemented the gallant heart of their mount . . . . . the **F-105 Thunderchief.**

With the bombing halt above the 17th parallel, instituted in March of 1968, the role of the **Thud** changed considerably. At the zenith of "Operation Rolling Thunder", the **F-105** was used in the main to "go downtown". (pilot's slang for missions into the heart of Route Package Six) These missions were flown by large strike forces, and required a high degree of planning and coordination. Ordnance carried most often was six 750 lb. bombs on the center line MER, with 450 gallon fuel tanks on the inboard wing stations, and ECM pods on the outboard stations. Because of the intense and accurate anti-aircraft fire, the aircraft were usually limited to one pass on the target, followed by a speedy exit of the area. The only time they went back to the target area was to provide RESCAP for downed pilots.

When they began to fly more missions into the more permissive environment in lower North Vietnam, they changed their tactics and their combat loadings. One of the pilots who flew the **F-105** in the

Captain Buddie Reinbold counted 87 hits in what was left of his *Thud* after nursing the riddled 105 back to Thailand after a 1966 mission over North Vietnam. Reinbold proved as tough as his airplane, overcoming painful wounds as well as the loss of his instruments, electrical and radio systems in the long flight back to his base. (USAF)

latter half of 1968, on missions into North Vietnam was Captain Mark Foxwell, who was then assigned to the 357th TFS, of the 355th TFW, at Takhli RTAB. This is what he had to say about the Thud and his experiences with it; "What we learned in flying missions to the lower route packs, was that the airplane was better employed in flights of two or four. We were able to carry so much more ordnance, because the lower SAM threat negated the necessity of carrying ECM pods, that you could run yourself out of gas before you got rid of it all! We were briefed for primary targets, secondary targets, and tertiary targets . . . then we'd go back and refuel . . . and go onto another target. In fact, I've hit targets, then traveled five or six hundred miles to go to another target. We got to the point where we sent out flights of two, rather than four, since two guys could work together with much more flexibility than four. By June or July of 1968, there was some concern over whether or not we would be able to mount a big strike mission like those so commonly flown downtown. The people who had the expertise had rotated out of the theatre, and we had a real problem in making it work. But we became very proficient at the kind of work we were doing. We were always briefed onto a primary target . . . one we could go and get on our own, at such-and-such a coordinates. Then we were briefed on a FAC to work with . . . "Misty FAC's" in North Vietnam, and A-1 or 0-2 FAC's in Laos. Eventually they opened it up for us even more. We carried our own strike cameras, so we took our own pictures, analyzing it when we returned from the missions. By doing this, we were able to go back to a target the following day and get what we missed the previous day. If we had had to wait for the regular Recce people to lay on a mission, fly it, then analyze and send us the results, the enemy would have moved whatever it was we were after.

A couple of missions really stand out in my mind, and they demonstrate the capabilities of the **Thud.** On the first, Major Bill Pachura and I were briefed for an armed recce into North Vietnam. We had just dropped off the tanker inbound, when they came up with a "hot spot", which turned out to be a suspected POL dump at Quang Khe, which is on the North Vietnamese coast just above Dong Hoi. We were carrying a clean load, consisting of the 650 gallon centerline tank, 2,000 lb. bombs on the inboards, and CBU 24/29 on the outboards. We made our first pass over the suspected target subsonic, on the tree-tops. The whole place erupted with gunfire, and we knew we had something worthwhile. We pressed on out over the water, and discussed how to hit them. I decided to make another low level pass, to draw the fire, while Bill orbited overhead. When he saw them shoot he would roll in and hit the guns. I made my pass supersonic, on the deck, carrying all those bombs. He spotted the guns and we clobbered them. We got rid of all of our ordnance, including the 20mm, and got a lot of secondary explosions that day . . . we had a good day. One of the missions I really liked was when we got an F-4 guy out of North Vietnam. We had hit our primary target with bombs, and we were on our way back to the tanker when the F-4 went down. We refueled and headed for the area he had gone down in. It was hot with enemy anti-aircraft, so we suppressed with the rockets we had on the outboard stations, then went back to the tanker for more fuel. On our second trip to the RESCAP area, we used the guns to suppress, hanging around until the Jollies could pick him up. The Thud just carried a lot of ordnance!

You could get supersonic down low without even knowing it. The F-106, for example, gets very sensitive when you near "the mach" at low level. The Thud, though, was very stable. You couldn't even tell you were going supersonic . . . as long as you didn't try to turn it! There was a lot of intra-wing ribbing over the relative merits of different airplanes. On a particular "Sky-Spot" radar bombing mission I remember, the weather was pretty bad and a lot of flights were checking in with the controller. When you checked in, you gave you call-sign, type and number of aircraft, and amount of ordnance on board. The controller asked us to climb to 22,000 feet for our run. Now, with all those bombs on board, the service ceiling of the Thud was no more than 18,000, so naturally we had to explain that to the controller. And, also quite naturally, some anonymous F-4 driver had to come on the air with a negative comment about the capabilities of the 105. But fifteen minutes later, when the F-4's were approaching "bingo fuel", and they still hadn't started their run, and they were starting to worry about it, and they let the controller know they were worried . . . well, it was our turn to comment on the limited range of the F-4.

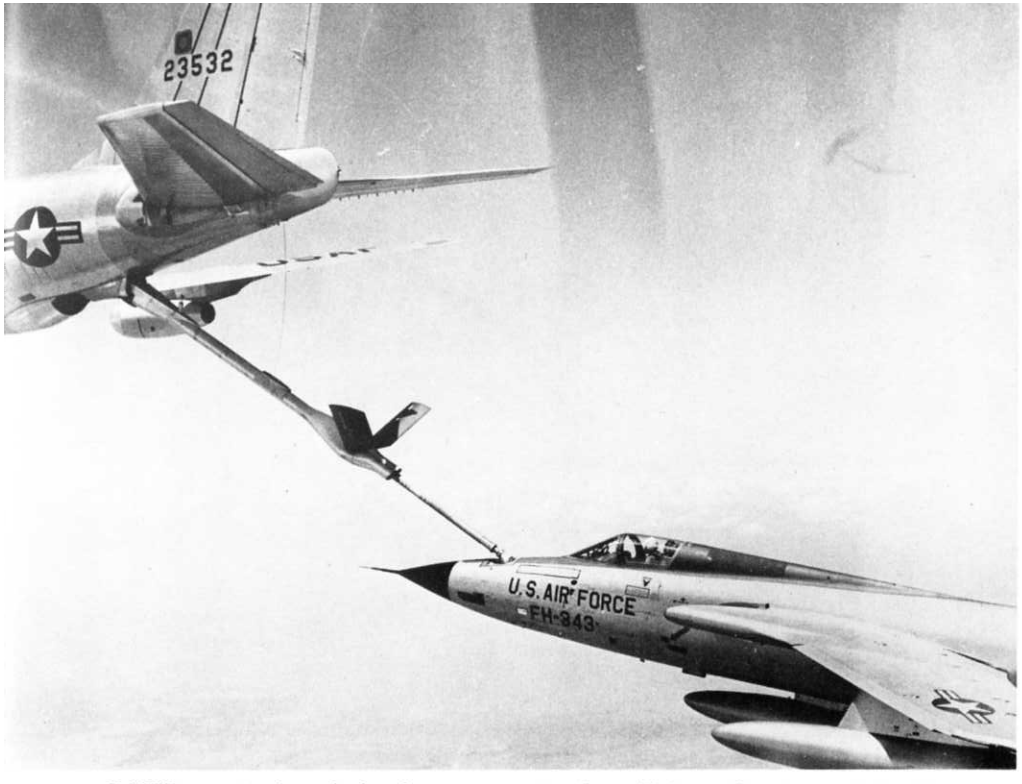
With our high wing loading, and a full load of bombs, if we had to refuel above 15,000 feet, we had to go to afterburner to stay on the tanker. The 105 had an extended afterburner range on the throttle, and you could throttle back to below min/AB for refueling . . . in fact, some guys got pretty adept at using full military power only when they were locked up on the tanker, and the tanker would actually tow them around the sky. This isn't as bad as it sounds . . . it was just that, at the tanker's speed, we were way behind the power curve."

■■■

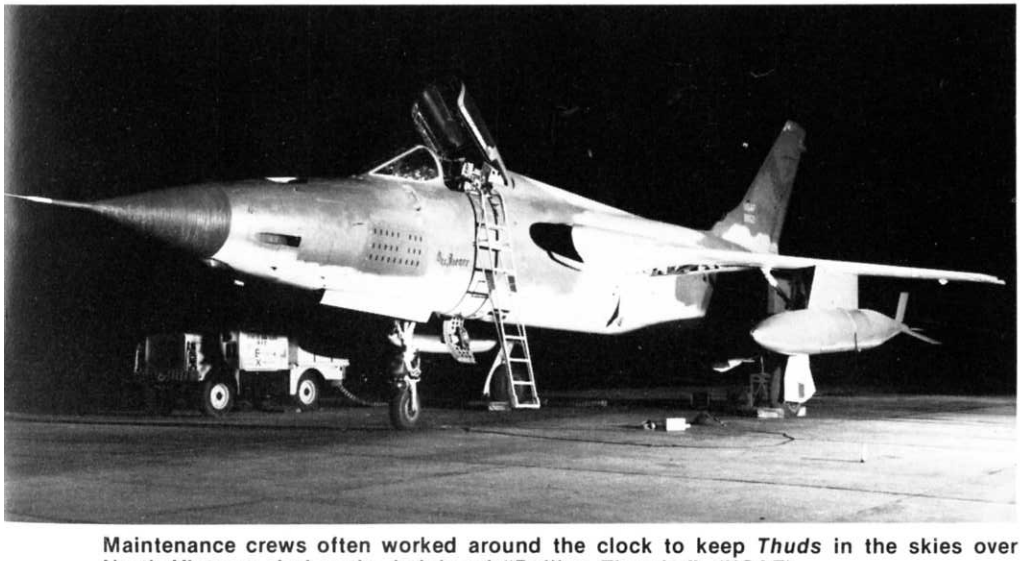
Loaded with 750 lb. bombs, and rocket pods, a *Thud* of the 4th TFW takes off from Thailand for a mission against North Vietnam, 1965. (USAF)

Flight of *105's* formates on a Tanker over Southeast Asia, 1965. (USAF)

4th TFW *F-105D's* beginning a mission against North Vietnam in 1965. Early in the air war against North Vietnam, Thuds carried rockets on outboard pylons. Radar directed AAA and SAM's forced Thuds to start carrying ECM gear later in the war. (USAF)



F-105D on a tanker, during long over-water ferry flight to Southeast Asia. (Republic)

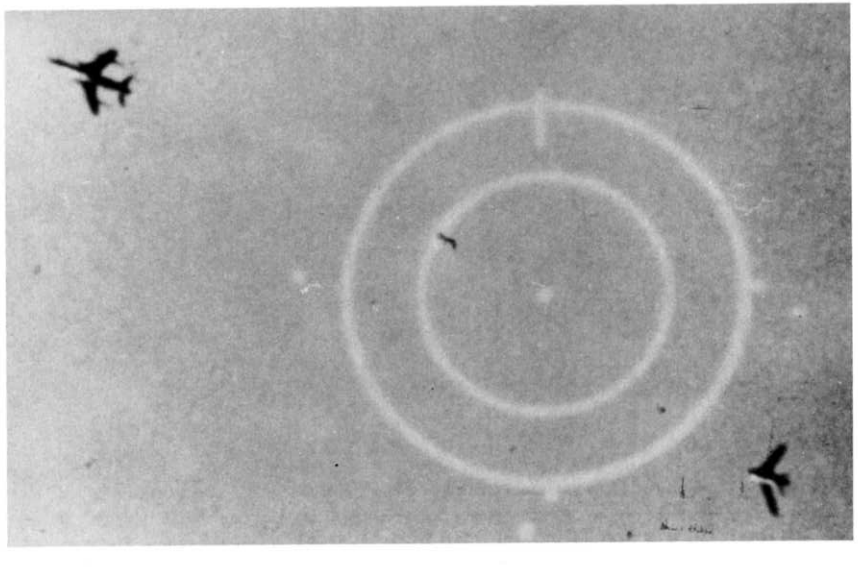


Maintenance crews often worked around the clock to keep *Thuds* in the skies over North Vietnam during the height of "Rolling Thunder". (USAF)

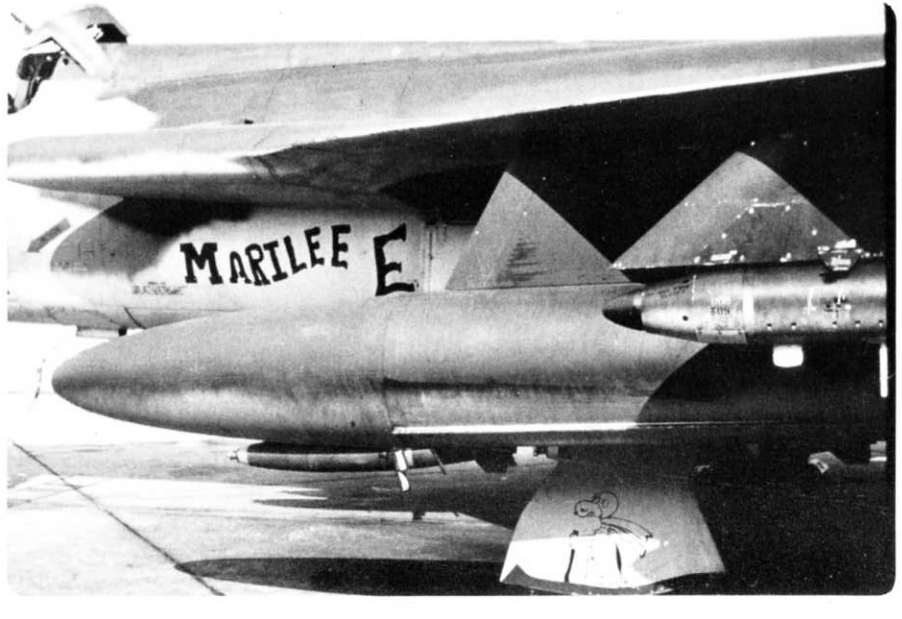
Thuds with incomplete bomb loads enroute to North Vietnam during the 1966 "bomb shortage". (USAF)

Armament specialist preparing some iron discouragement for Uncle Ho. (USAF)

Thud nemesis: SAM streaks by a THUD (lower right center in photo above) without exploding, and explodes out of range. (Below left) Though largely ineffective by itself, SAM forced the bombers to lower altitudes, where radar directed guns could get at them. Guns were very effective. Mig 17, unaware that he is about to be hammered by wingman, begins to pull lead on a Thud. (below right) (USAF)



F-105D 59-1749, of the 469th TFS, 388th TFW, Korat RTAB. *"Mr. Toad"* and *"Marilee E"* were painted in reverse camouflage scheme, and carried four variations of the above names. SSgt Sailar was crew chief for three different pilots who flew the airplane on their tours. It was finally shot down. Toad was black, green, and white, with brown walking stick, names were in black. (Don Larsen/Douglas Remington via Lars Soldeus)

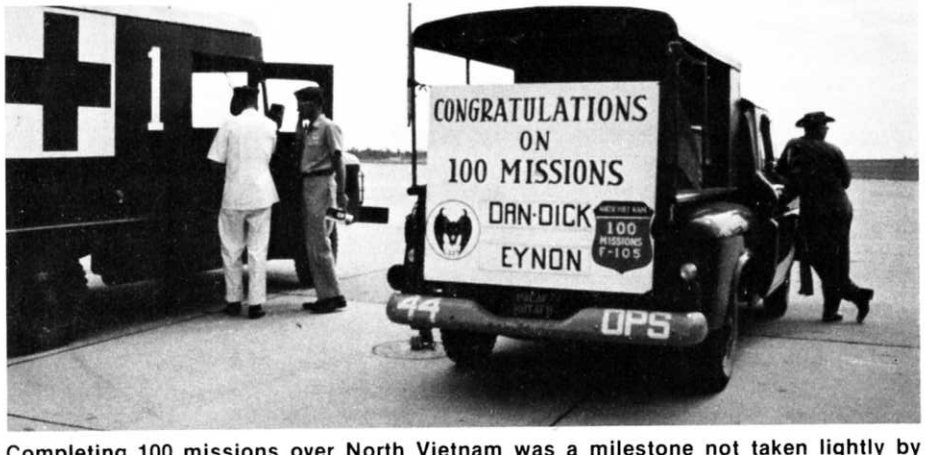


"Sittin Pretty" of the 469th TFS, 388th TFW, Korat RTAB, December, 1967. (Don Larsen via Lars Soldeus)

Note indistinct camouflage demarcation line on *"The Avenger", F-105* 61-194 of the 34th TFS, as it prepares to do some avenging from Korat, June 1967. (Don Larsen via Lars Soldeus)

Thud of the 44th TFS loaded for mission to Route Package Six, from Korat, 1967. (Maj. Dan Cherry)

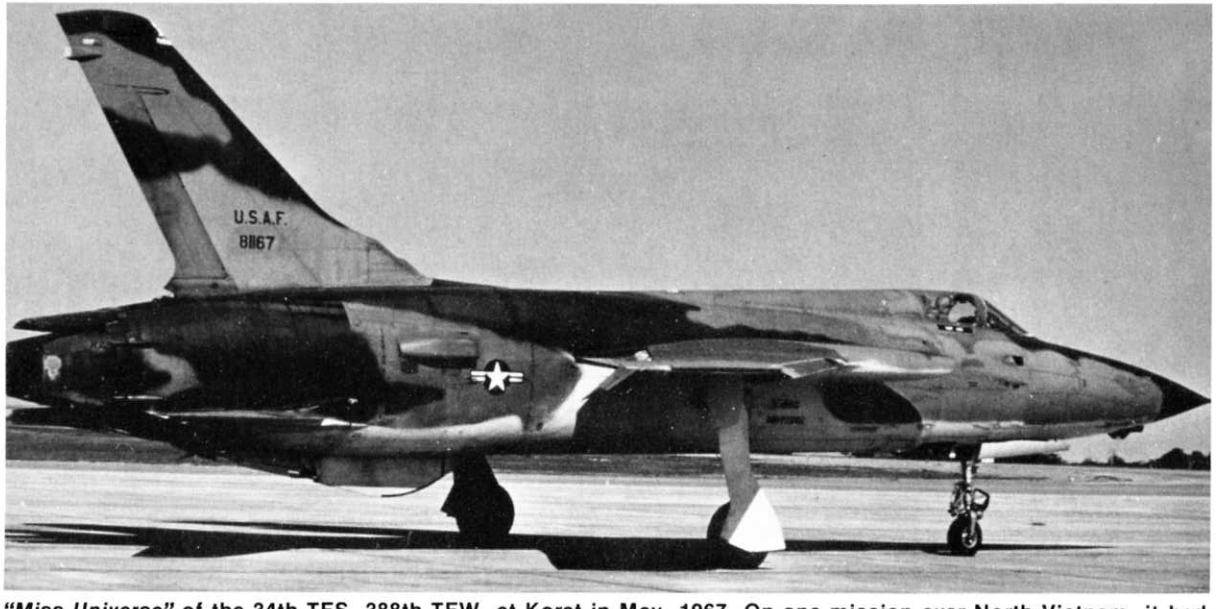
F-105D-10-RE, 60-0488 *"The Virgin"* of the 44th TFS, was flown by Capt. Dan Cherry on his tour in 1967. Lettering black with red edging, cherry in natural colors. (Dan Cherry)



Completing 100 missions over North Vietnam was a milestone not taken lightly by anyone, and pilots returning from their 100th were greeted in style. (Dan Cherry)

Thud of the 44th TFS in the arming area prior to mission over North Vietnam. As the Mig threat became more serious, 105's started to carry a *Sidewinder* on one pylon, and an ECM pod on the other. (Dan Cherry)

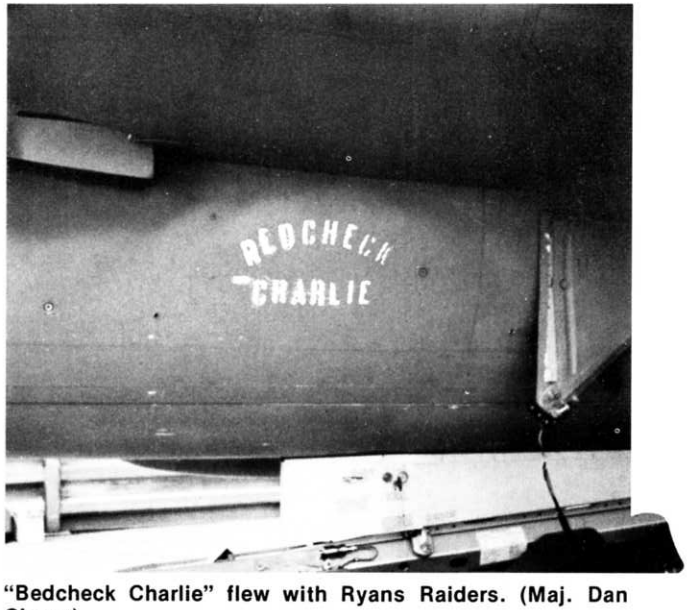
Dan Cherry receives a handshake and a bottle of champagne upon completion of his 100th mission over North Vietnam. (Dan Cherry)



"Miss Universe" of the 34th TFS, 388th TFW, at Korat in May, 1967. On one mission over North Vietnam, it had the entire right stabilator shot off, but managed to return safely. (Don Larsen via Lars Soldeus)

(Maj. Dan Cherry)

F-105F 63-8312, of *Ryan's Raiders,* at Korat June, 1967. Undersides were camouflaged tan and pale green for night missions. (Don Larsen via Lars Soldeus)



"Bedcheck Charlie" flew with Ryans Raiders. (Maj. Dan Cherry)

(Maj. Dan Cherry)

(Maj. Dan Cherry)

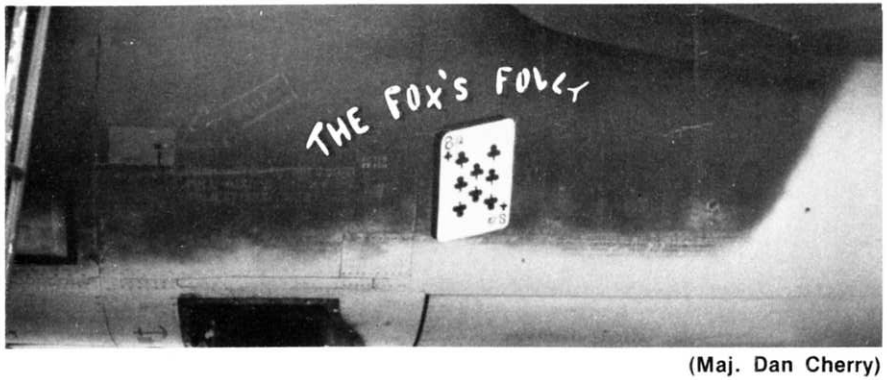
(Maj. Dan Cherry)

(USAF via Norman E. Taylor)

"I Christen Thee....."

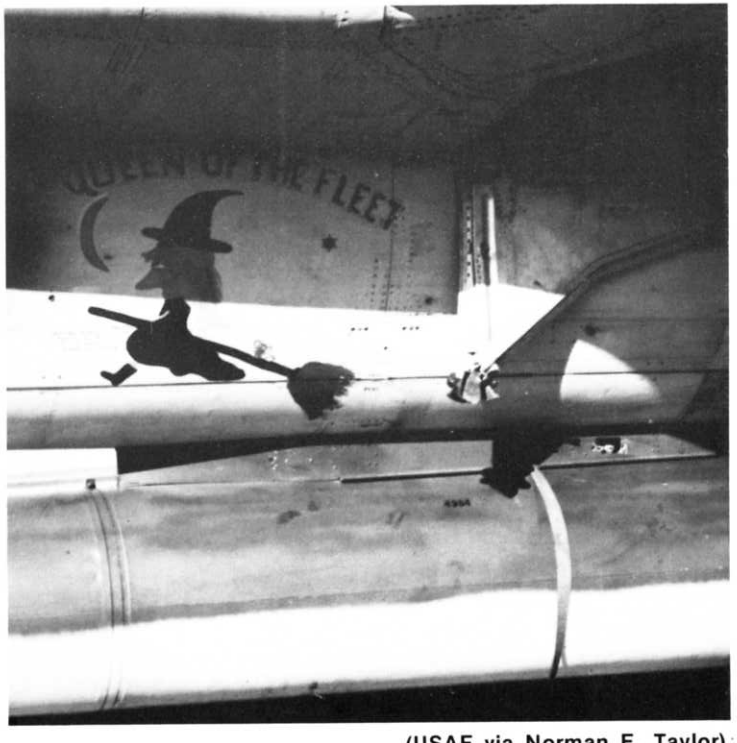
(Maj. Dan Cherry)

(USAF via Norman E. Taylor)



(Maj. Dan Cherry)

(Maj. Dan Cherry)

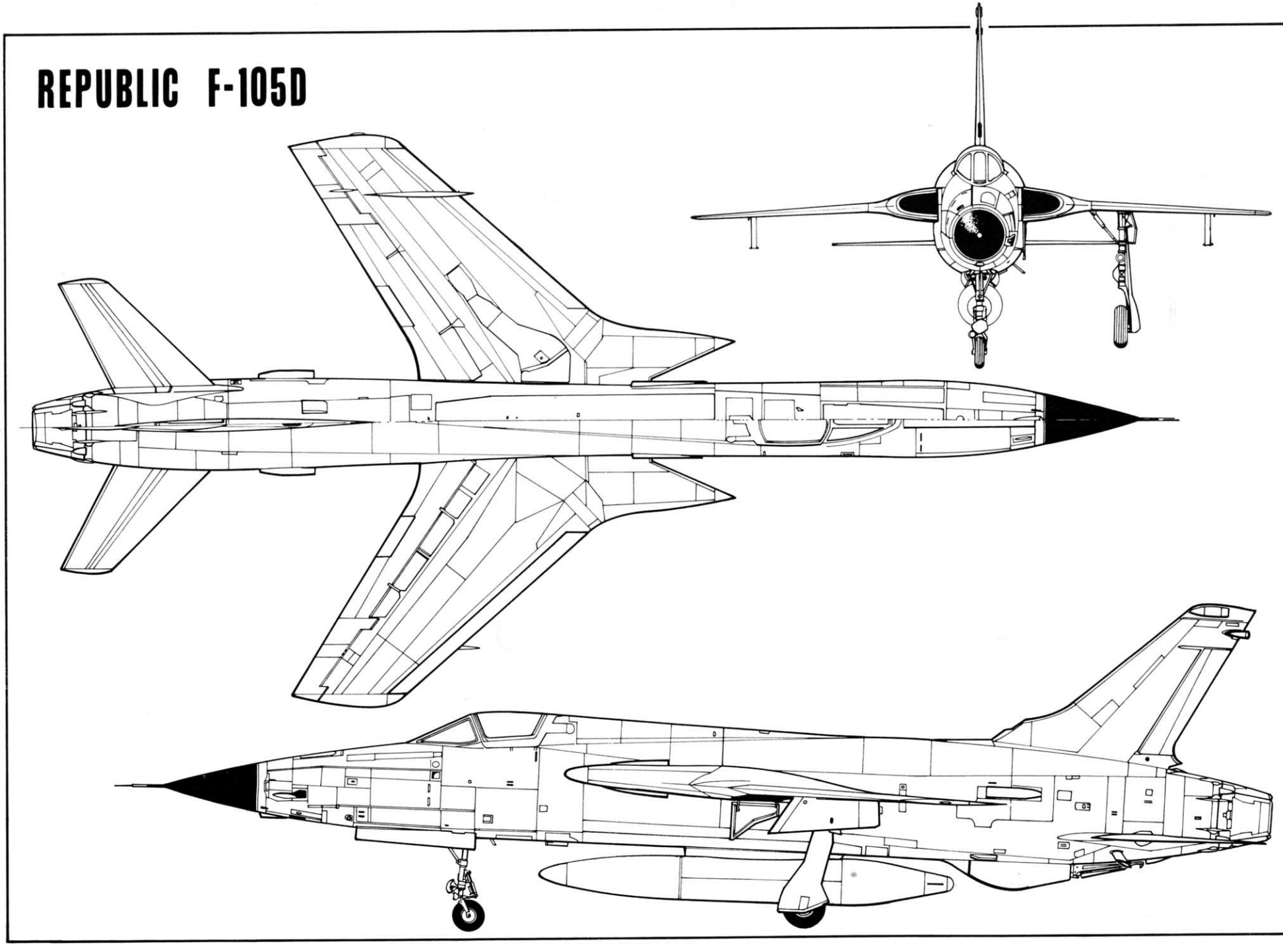


(USAF via Norman E. Taylor)

(Maj. Dan Cherry)

(Maj. Dan Cherry)

REPUBLIC F-105D



F-105D-25-RE of the 357th TFS, 355th TFW, as it appeared during operations from Takhli RTAB in the spring of 1970. It is shown with ECM pod for illustrative reasons. (Pods were not normally carried during this period, as most operations were conducted in low SAM threat areas.)

F-105G-1-RE of the 66th FWS/57th FWW, based at Nellis AFB, Nevada. Photo taken at Kelly AFB, Texas, May 1973. (Norman E. Taylor)

F-105D-10-RE of the 563rd TFS, 23rd TFW. One of the D's retrofitted with the 'Thunderstick II' avionics saddleback. (Norman E. Taylor)

F-105B-10-RE of the 335th TFS, 4th TFW, as it appeared in the spring of 1959.

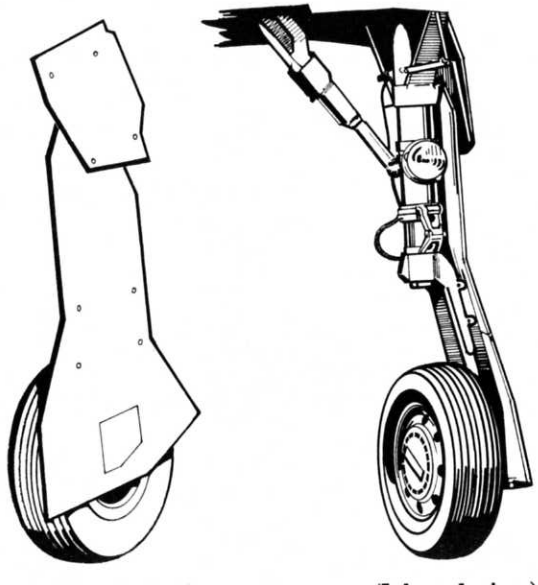
F-105B-15-RE of the 141st TFS, New Jersey ANG. Note the wide variations in hue of tan colors in camouflage between this well-worn veteran, and other more recently painted 105's on this page. (Norman E. Taylor)

Don Carson flew F-105F-1-RE 63-8274, 'The Great Speckled Bird' on his tour as a Wild Weasel. It was so named because it couldn't seem to retain it's paint. Carson says he isn't sure if this was because of the high rate of knots he and his 'Bear' traveled at on most missions, or because of a quirk in the paint. (Don Carson)

Thud of the 34th TFS, 388th TFW taxies out from Korat for a mission into North Vietnam, 1968. Note ECM pod on outboard pylon. (USAF)

F-105D, of the 357th TFS, 355th TFW, out of Takhli RTAB was photographed at Ubon RTAB in March 1968. ECM pod on outboard pylon, MER on centerline. (Al Piccirillo via Norman E. Taylor)

Thuds of the 333rd and 354th TFS, 355th TFW refuel enroute to North Vietnam. (Al Piccirillo via Norman E. Taylor)

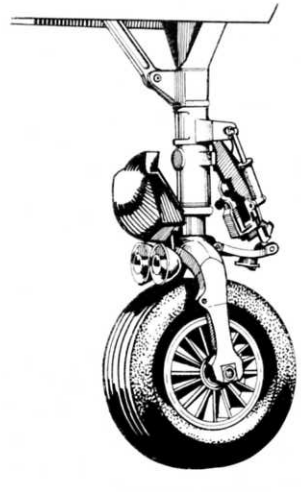


(Outboard view) (Inboard view)

MAIN LANDING GEAR

F-105D-20-RE 61-0152 of the 34th TFS, 388th TFW, out of Korat RTAB was photographed at Ubon RTAB by Major Al Piccirillo. (via Norman E. Taylor)

105's of the 354th and 357th TFS, 355th TFW formate on a tanker, April 1968. Though missions at this time were flown only to lower route packs, ECM pods were carried until it was determined SAM threat was not as great as in pack 6. (USAF)



NOSE GEAR

Vampires, take it down!

Author's Note: The following article, by Captain Don Carson, first appeared in the May, 1973 AIRMAN. It is reproduced here with the kind permission of AIRMAN and Captain Carson. Don Carson flew 131 F-105 missions with the 44th TFS "Vampires", as a Wild Weasel pilot. He is also the author of Squadron/Signal Publications "The F-106 Delta Dart in Action".

"SAM's at two and five . . . guns at three," my Bear, Don Brian, coolly calls over the intercom, telling me where the threat is located.

"I light up the afterburner, and our speed approaches 600 knots. I turn toward the SAM site which is looking at my flight of four Weasels with his radar. We have the green light in the outboard weapons pylon buttons, indicating that when we're in range and position, we are armed and ready to fire our AGM-45 **Shrike** antiradiation missiles.

"SAM's at twelve o'clock . . . a three-ringer." My Bear now has the SAM battery off our nose and is getting very strong signals on his indicating equipment. We press in, pull up our F-105 at the proper range, and hose off a pair of **Shrikes** just as the SAM site fires at our flight. My skin crawls as the rattlesnake sound in my headset and the flash of the warning gear light tell me it is for real this time.

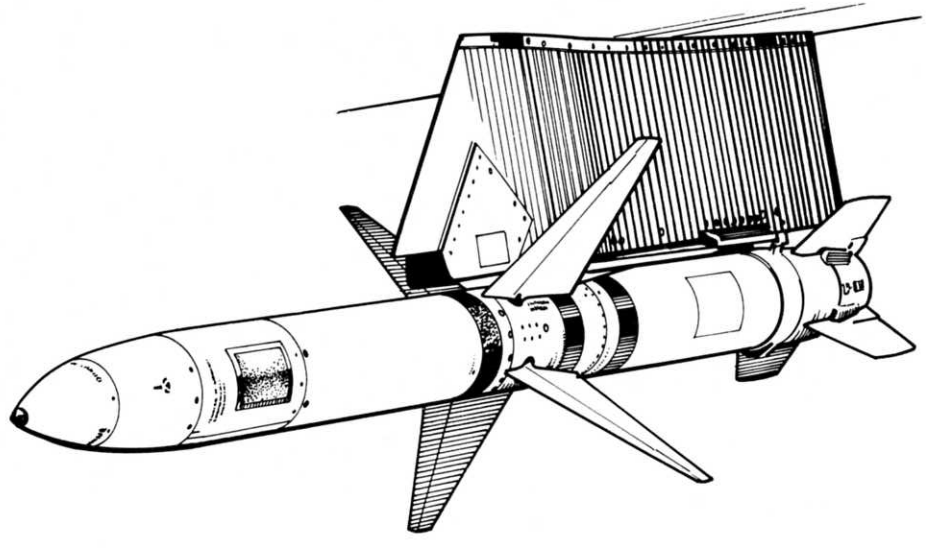
"Valid launch . . . twelve o'clock," yells my Bear.

"Vampires . . . take it down," I call to my flight as I nose over and unload. "Taking it down" is the standard Wild Weasel maneuver of rapidly diving in full afterburner and picking up speed to avoid the SAM's being guided to your aircraft. Sometimes by descending you can even lose the SAM radar tracking you, or force the SAM to overshoot and pass harmlessly by. If this does not work, at least you have one heck of a lot of air-speed you can use to make a break at the last moment and maybe make the SAM miss your aircraft. Even today when you see a fellow Weasel, the greeting is "Take it Down."

But now I see the clouds of dust and the "telephone poles" trailing fire as they climb. Our **Shrikes** are still guiding directly toward the radar van which controls those SAM missiles. It is located in the center of the SAM ring, surrounded by the missile launchers.

"Guns at four o'clock," says my Bear. "Move it around. They are really on us." I don't, because SAM is our main concern at this particular moment. Suddenly, however, the SAM's appear to go unguided and streak off well above our flight. This meant the radar control van had shut down in hopes of foiling our **Shrikes**, but it doesn't work. Our **Shrikes** impact the radar control van, and dust and

***F-105F "Wild Weasel"* of the 44th TFS touches down at Korat, after a 1968 mission. (USAF)**



AGM-45 'Shrike' anti-radiation missile

44th TFS *Wild Weasel* gets a fresh film cartridge for it's strike camera at Korat RTAB, 1969. Other access doors open on the left side of the nose are for Hydraulics systems accumulators, and utility hydraulics reservoir filler. Performance figures of the "F" model Thud are within 3% of those for the "D", main difference being in dimensions. (The "F" is 5'3" longer, and 6" taller.) (USAF)

smoke rise to make the target area clearly. We can "jink" at last to keep the guns which are still hammering heavily at us from having a steady target.

Climbing back to gain altitude for a dive bomb pass, I arm up my bombs and check for the green light in the centerline weapon station indicator. It looks good. I roll our F-105 over on its back and pull the nose through the horizon until the burning SAM control van fills our gunsight combining glass . . . at 45 degrees of dive. I roll the wings level and put the pipper on the SAM launcher, just beyond the control van — 550 knots, passing through 6000 feet — it looks good.

"They are really hammering us with the 37mm. from the east side of the site," calls my Bear. I see the red streaks passing over the canopy. There is not much that we can do. "Hang in there, Super Bear," I tell him, as I depress the pickle button on the control stick. We can feel the six 750-pound bombs leave the aircraft.

Lighting the afterburner, I honk back on the stick and get crunched down in the seat by the weight of 7 G's. I work the rudders and start another "jinking" turn, to throw the gunners off. I read somewhere that 90 percent of all fighter pilots pulled off a target to the right, so I almost always pulled off to the left. Lucky thing, today, at least because three more guns had opened up and were lighting the sky off my right wing as we turned left. Had I turned right, we would have been in the middle of the flak. There is a tremendous explosion as a ball of fire and dust rises from where a SAM on a launcher had been just moments before. We continue climbing as we watch our flight devastate the remaining missiles and launchers of this once-deadly SAM complex. This is one SAM that will not come back to "stuff" us or our friends.

The surrounding guns are still extremely active and I feel that we are very lucky to get out without having anyone hit that day. We rejoin our flight of four and head southwestward to find our tanker and some much needed fuel.

Once we cross the river, we spread our and I reach back beside the headrest and pull out the rubber hose which connects to a thermos bottle full of the best ice water in the whole world. I will be eternally grateful to Republic Aviation for installing this magnificent piece of equipment in the **Thud.** After a couple of hours with the hot Southeast Asian sun beating down through the canopy, you feel like a wilted stalk of celery in a hothouse. The tension and heat of the battle often leave your mouth so dry it seems full of cotton. It's funny how you remember little things . . . even today a glass of cold water on a hot day brings back the vision of reaching for that water bottle hose.

Other memories come back, too. **SAM's, Bears, Vampires, Shrikes, Thuds.** Strange sounding names? Not to a Wild Weasel crew. Oh yes! The Weasel I'm talking about weighs 54,000 pounds. It's not the world's largest animal. It's a specially-equipped two-place F-105 **Thunderchief** that performs one of the most daring combat missions ever imagined.

Wild Weasels have operated from both Takhli and Korat RTAFB under several squadron designations. The last of the F-105 squadrons of the many that once were stationed in Thailand is a Weasel Squadron: the 17th Tactical Fighter Sq. at Korat RTAFB.

BIRTH OF THE WEASELS

In the late 1960's, the Weasel Squadron at Korat was called the 44th TFS **Vampires.** "Rolling Thunder," was the code name for the air war in North Vietnam, and it was in full swing. The SEA skies were filled daily with flight after flight of fighter-bombers pounding targets in North Vietnam. Unfortunately, these same skies were also filled with the heaviest concentrations of radar controlled antiaircraft guns (AAA), MiG's and Surface to Air Missiles (SAM's) ever seen.

The strike flights were made up of F-4's and single seat models of the F-105. Heavily laden with bombs, they were easy targets for SAM's when they went North. If targets were to be hit within the protective SAM rings which surrounded any major target area, it became obvious that some form of SAM suppression tactics were necessary. F-100's, became the first "Weasels" in this role, but the greater armament, speed and range of the F-105 proved far better suited to the unique mission.

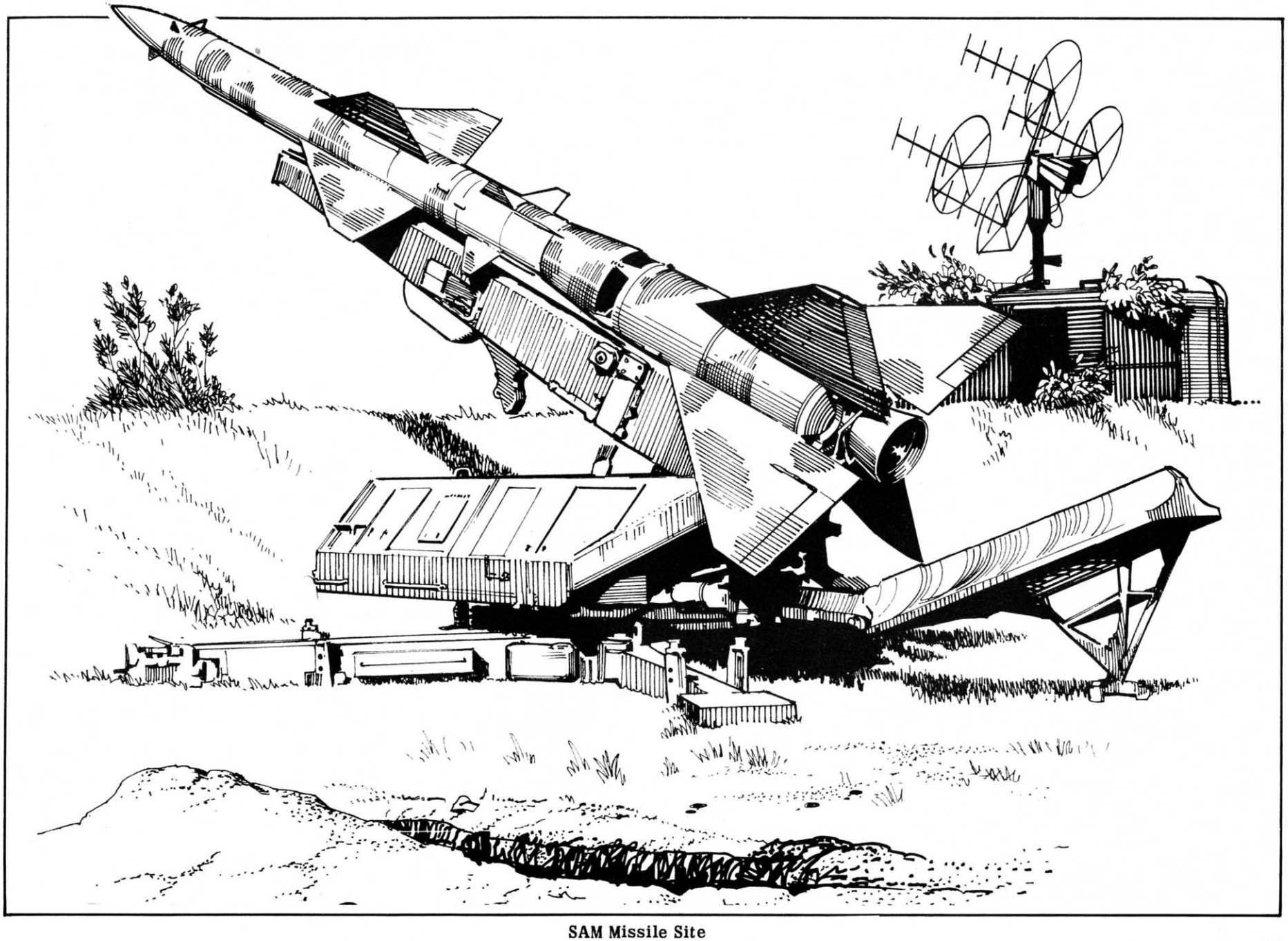
Capable of speeds in excess of 900 miles an hour on the deck, the F-105 could easily walk away from the more maneuverable MiG's which also roamed the skies of North Vietnam, ready to strike the unwary.

A Weasel pilot and his Bear (electronic warfare officer) fly as a precision team. Each understands and trusts the other's abilities completely. There is no time to ask questions when a Bear yells "SAM's at three o'clock . . . take it down!" You react instantly — and even that may be too late.

"Bears" are a strange breed of aviator. Their fantastic ability to interpret the radar scope's electronic messages and warnings in the back seat inspires admiration not only for their ability but their sheer fortitude in combat. I will never, for the life of me, understand how anyone could be brave enough to sit there during a hairy combat mission and not grab the stick or throttle!

I guess they had as much faith and trust in their pilots as we had in them.

Weasels always flew as a crew. It was much better to fly with the same person everyday. You soon worked out a private code system which could say more with less words than you ever thought possible. This became important when there were 20 strike aircraft sharing the same radio frequency as your Weasel flight and there were SAM's and MiG's in the area. The radio could get so full of chatter that it was a small miracle to get a word in edgewise. Through the din, you and your Bear not only had to keep each other



SAM Missile Site

informed on what was happening, but you also had to keep the strike flights advised. Especially you had to warn them when SAM came up.

It would be difficult to heap too much praise on the **Thunderchief.** It is definitely a pilot's and Bear's aircraft. The cockpit is large and quite comfortable for a fighter. It has lots of leg and elbow room, even for someone like me who is 6 feet 6 inches. With a full load of ordnance, the old **Thud** would weigh in at 54,000 pounds, and on a hot day at Korat, would take a cross-country trip on the ground before getting airborne.

Once in the air, however, the machine was a pure delight to fly. You could trim it up and go supersonic 50 feet above the trees without holding the stick. It was the most stable and honest aircraft a pilot could ever ask for. After flying the **Thud,** I personally doubt that any pilot would ever be completely satisfied with another aircraft. I have flown faster and more maneuverable fighters, but they are just not the same as the F-105. Do I sound prejudiced? I am, and proud of it. I am also still in love with the F-105. Try and find a **Thud** driver who isn't!

RYAN'S RAIDERS

In 1967, while the Weasel program was in full swing, a special group of six F-105's (Weasels) were modified with an improved radar bombing system, first tested at Yokota AB, Japan. Men like Majors Ken Furth, Stan Lockley, Captains Larry Huggins and Paul Hanson, some of the most experienced F-105 pilots in the USAF, were the initial instructors in this pioneer program. They developed the tactics and expertise to give the Air Force its first accurate all-weather night fighter bombing capability.

The back seaters were ex-radar bombardiers who were now part of this elite program named RYAN'S RAIDERS for the man who spearheaded it, Gen. John D. Ryan. This highly specialized mission, while not exactly the Wild Weasel mission, was so closely dependent upon Weasel support that we considered it all part of the Weasel operation. Officially known as **Commando Nail,** it became part of the 44th TFS mission, and select crews would fly nightly bombing missions against targets deep into North Vietnam. The **Raider** pilots and Bears would spend hours studying radar predications and target area maps to determine the best approach. They then flight planned together for additional hours to assure precision to the nth degree.

Raider missions were flown while most of the pilots at Korat were the O' club singing fighter pilot songs, or asleep in their hooches resting for a 4:30 a.m. take-off. Many mornings you taxied back from your mission, and saw the morning strike flight readying for take-off in the predawn semilight.

What were these **Raider** missions like? You've never lived until you've battled the Southeast Asia weather at night. There, thunderstorms can build all day, reaching unbelievable ferocity late at night. The problems of making a rendezvous with your tanker, who gave you fuel both going to and coming from your target, became far greater than during a day mission. A night thunderstorm tanker join-up and aerial refueling — with the lightning and St. Elmo's fire crackling around your canopy and pitot tube until they glowed with an eerie purple light — could be more frightening than the arcing red balls of 37 or 57mm. guns.

Weather was a factor most of the year, yet somehow you always found your tanker and always got your fuel. It still amazes me what man can do when he must. To fly under such conditions nightly and not lose more aircraft to natural causes alone is remarkable.

The one thing that always bothered me was what would happen if a bolt of the lightning, which was everywhere, were to hit the armed bombs which were strapped to the belly of my aircraft? To my knowledge, this never happened to anyone and somehow the worry became less important the closer we got to our target area and the more the NVA guns began finding us in the darkened sky. However, I still wonder.

Once into North Vietnam, you cut off all external lights and headed toward your IP (initial point), from which you would turn toward your target run-in. Flying at a carefully preplanned altitude and speed, you watched your radar scope, while your Bear gave you minute corrections from his larger expanded radar picture.

"We're on time, how's it look?"

"One degree left, target dead ahead at 25 miles," he would answer. As another flight provided cover in regular Weasel birds, you pressed in and delivered your nightly surprise packages to Ho's boys when they least expected it.

You never became complacent. Even if you managed to slip into the target area without too much trouble, you could be certain that the moment your bombs impacted the ground, every gunner in that portion of North Vietnam would be after you. The sky would light up like the Fourth of July.

Despite the knowledge every "Roman candle" was aimed at putting your aircraft out of business, the sight of 37mm. tracers arcing up in graceful curves with the illusion of increasing speed as they approached you, was still beautiful in a strange way. Of course, the farther away they were from your aircraft, the more beautiful they became! When they were all around you, lighting up the instrument panel so brightly that you didn't need the cockpit lights, they were downright ugly. It was easier to see a SAM or AAA at night, so you had more warning time in which to react. This balanced out the handicap of operating in darkness.

As you headed southwest once again, you often looked back to see the explosions and fires of the target you had just hit. It always gave me a good feeling to know that there was another load of

munitions or supplies that would not be used to kill people in South Vietnam.

WEASELS OF NOTE

The men who flew the Wild Weasel missions are some of the greatest men I have ever known. Many will go down in the historical accounts of the Southeast Asian conflict alongside great names from aviation's past. Men like Majors Mike Muscat, and his Bear, Kyle Stouder, credited with knocking out five SAM sites. Now both lieutenant colonels, they light up with pride when you ask them about their days as a Weasel. When asked what he liked most about being a Weasel, Colonel Muscat said, "It was a clear case of providing support for the strike forces and attacking highly professional military complexes of the enemy. There was no question of a SAM site being a civilian target."

Col. Robert S. Beale, now at the flight test center at Edwards, was a young major when he led many of the great raids up North. His flight of Weasels paved the way for the strike flights which followed. "As a Weasel, I knew that the strike force's success depended on how well I did my job. I did everything possible to get the SAM's to shoot at me and not at the strike flight. The beauty of being a Weasel was that you were on your own and had a great deal of flexibility in hunting, finding, and destroying SAM's."

Always the first ones into the target area and the last ones to leave, Weasels never failed to get their piece of the action. Bob Beale got even more than the normal Weasel's share. Credited with destroying half a dozen SAM's and an untold number of guns, he wears the Air Force Cross, Silver Star, two DFC's and 12 Air Medals in testimony of his deeds.

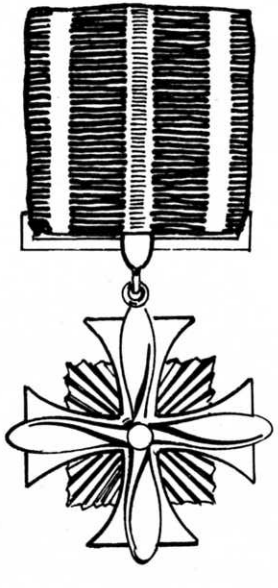
Then there are Weasels like Chuck Horner, Nick Donelson, Mike Gilroy, Billy Sparks, Jim MacInerney, Leo Thorsness, Merlyn Dethlefsen, and many others. The list includes SAM killers, MiG killers, Medal of Honor winners and just great fighter pilots.

If it were not for the Weasels, there is little doubt but that the bombing campaign of North Vietnam would not have been as successful as it was. Neither would losses have been as low as they were for the agile fighters and powerful B-52's who braved the heaviest defenses ever known in aerial warfare. In my book, that makes the Wild Weasel operation pretty damned important! I'm glad I was there.

■■■

F-105F **at Eglin AFB during testing of the QRC-380 ECM blisters on fuselage sides, 1970. (USAF)**

Air Medal



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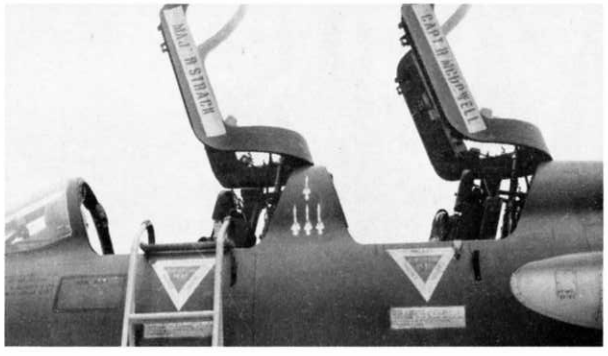
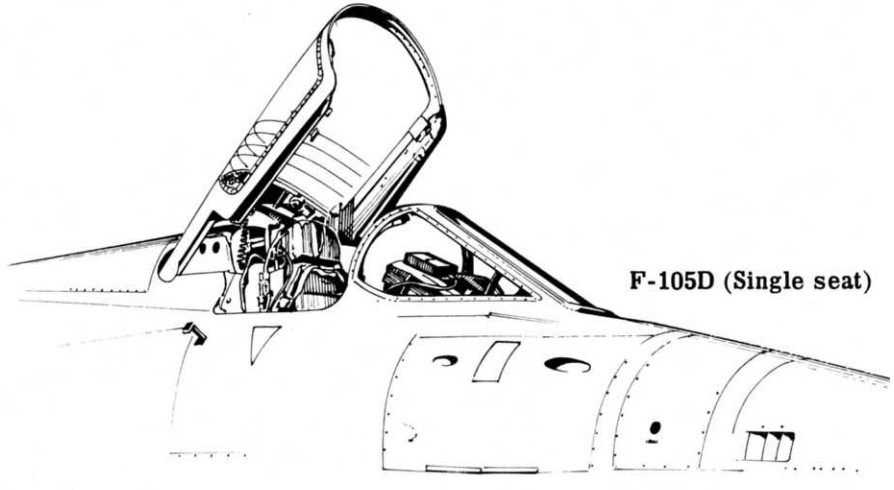
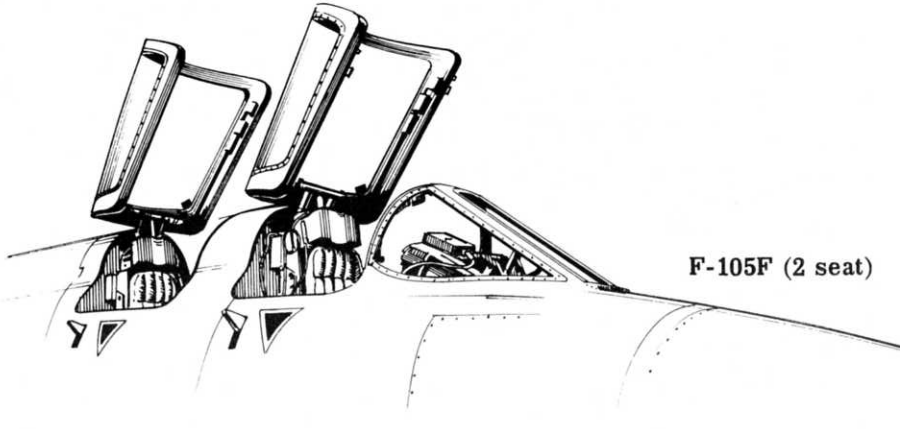


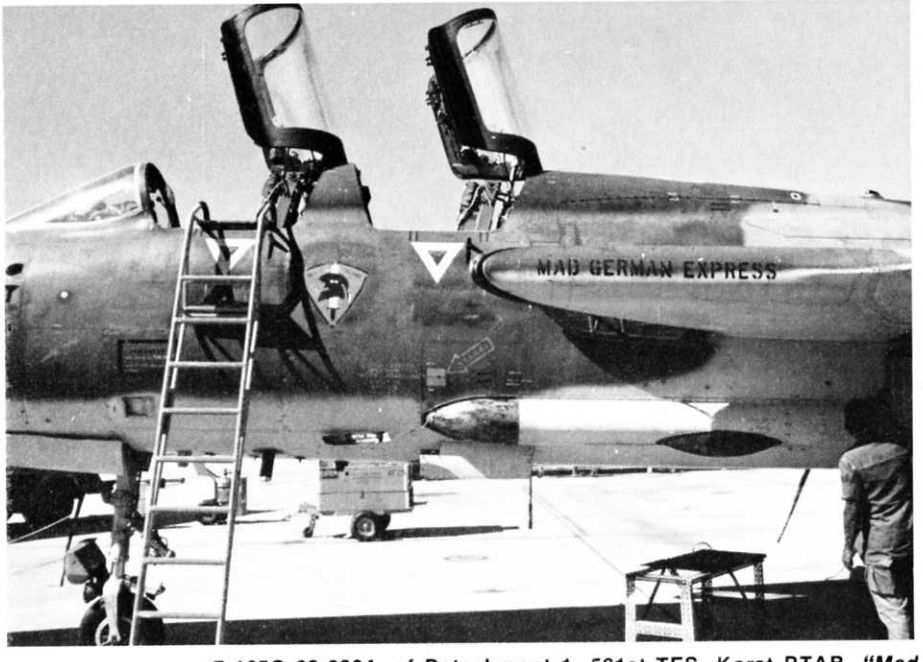
Major Bob Strack and his "Bear" recorded number of SAM sites they had destroyed between canopies of "Miss Molly", one of the early Wild Weasel equipped F-105F's. F-105D dubbed *"Flying Anvil"*, an allusion to the Thud's power-off gliding potential. (Neal Schneider)



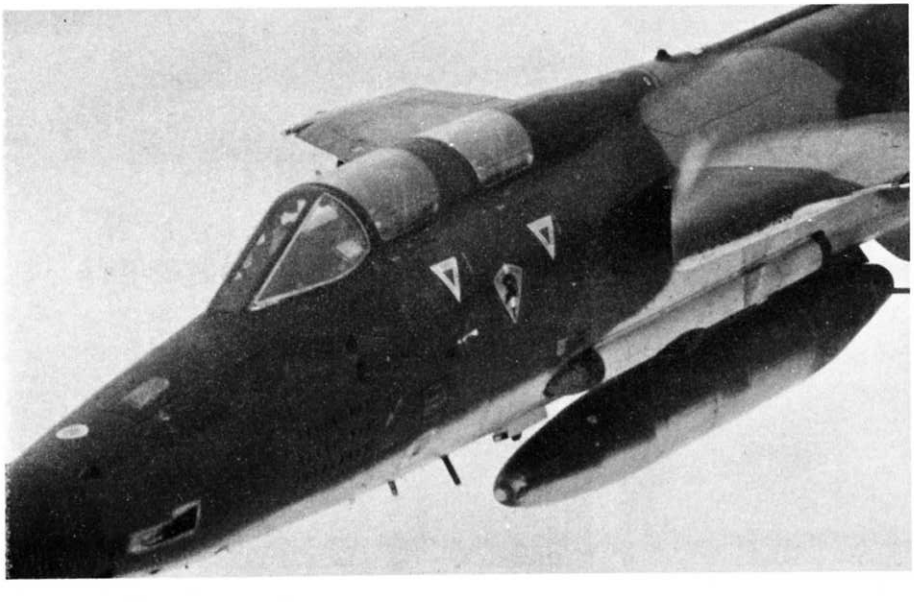
F-105D (Single seat)

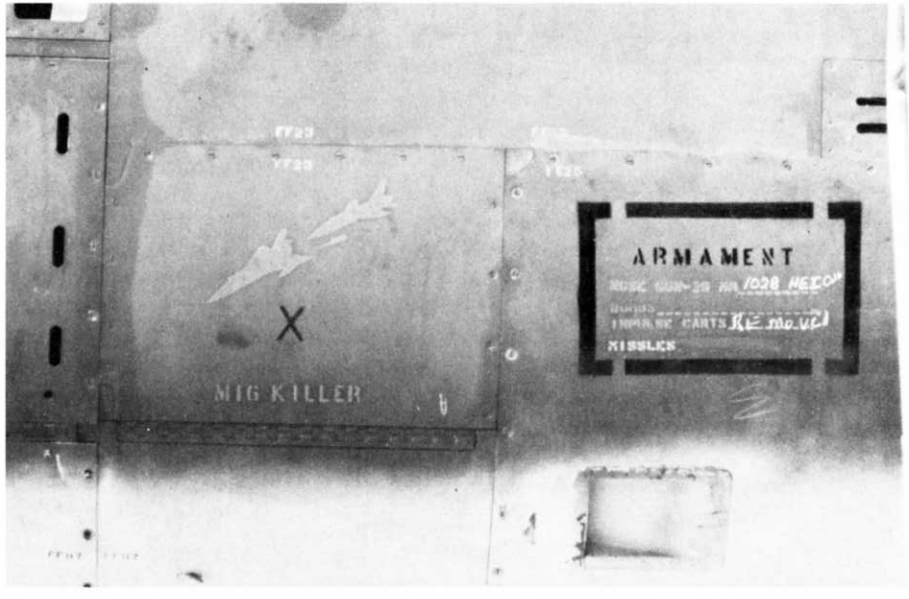


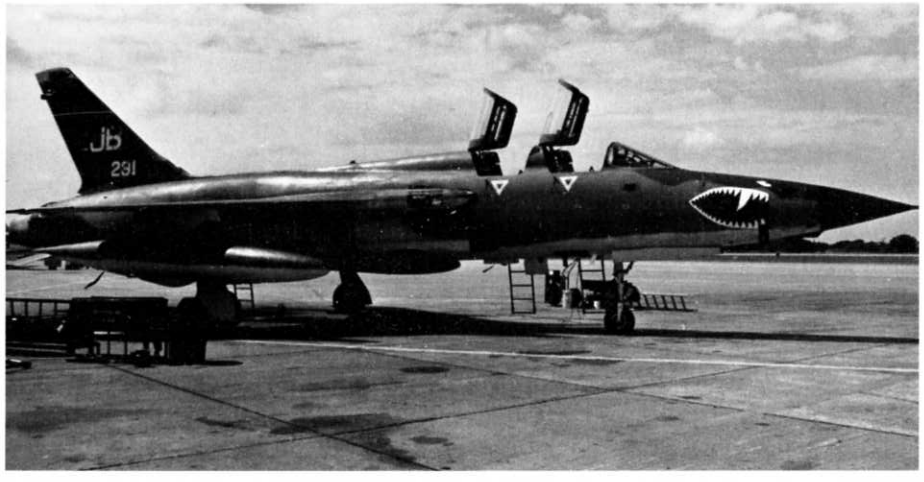
F-105F (2 seat)



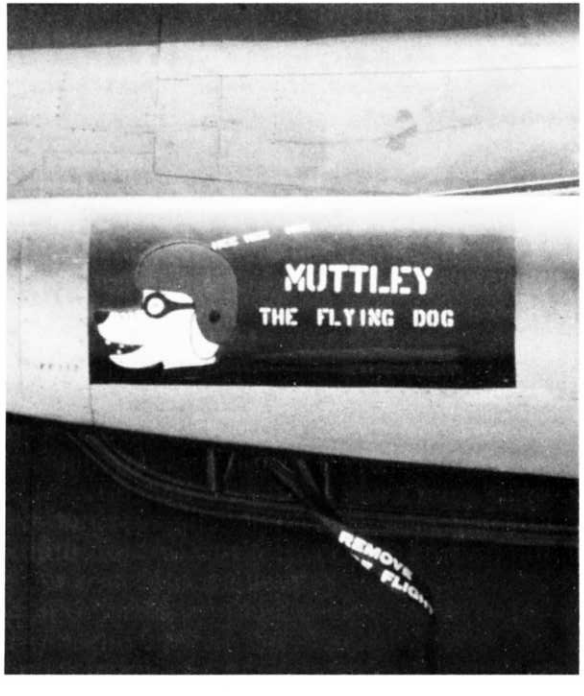
F-105G 63-0304, of Detachment 1, 561st TFS, Korat RTAB. *"Mad German Express"* was later named *"Patches"*. Canopy frames and shield were yellow. Helmet, lettering, sword handle, and shield outline black. (MSgt Don Larsen via Lars Soldeus)



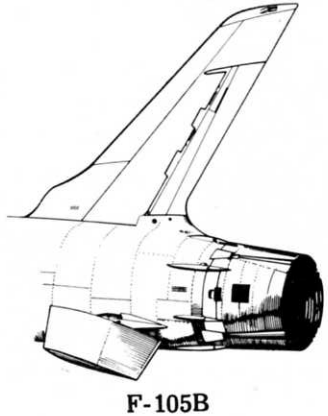




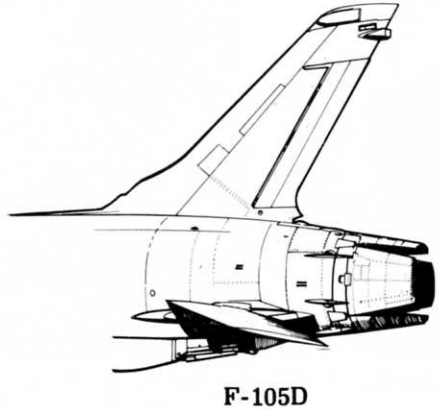
"Mig Killer" marking on *"Mad German Express"* is enigmatic, as it shows an F-105 launching a missile at an F-106! (left) (MSgt Don Larsen via Lars Soldeus) Other photos on this page show *"Muttley the Flying Dog"*, subject of color profile on rear cover. "Muttley" was F-105G of the 17th Wild Weasel Squadron at Korat RTAB. (MSgt Don Larsen via Lars Soldeus)



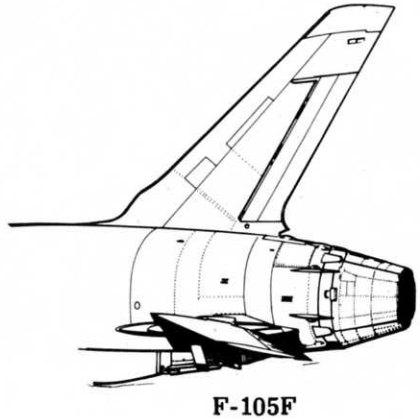
F-105F, fitted with QRC (Quick Reaction Contract) - 380 ECM blisters, shown during flight testing of the F-105G modifications. It carries practice AGM-45 "Shrike" missile on right pylon, and AGM-78B Standard ARM on left pylon. (USAF)



F-105B



F-105D



F-105F

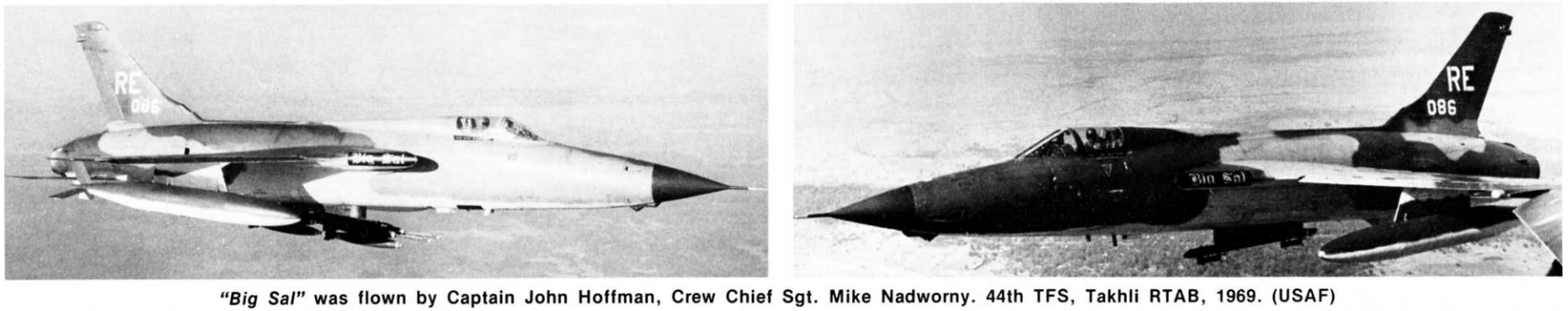
"High Stepper" was *F-105D,* 62-4244, of the 355th TFW at Takhli RTAB, August, 1970. Canopy Frames and background for name were medium blue. Open access door behind nose gear is for Auxiliary Electronics Compartment. (Don Jay via Lars Soldeus)

Thud of the 355th TFW in revetment at Takhli February, 1970. It is loaded with 750 lb. bombs on centerline, and 500 lb. bombs outboard. (USAF)

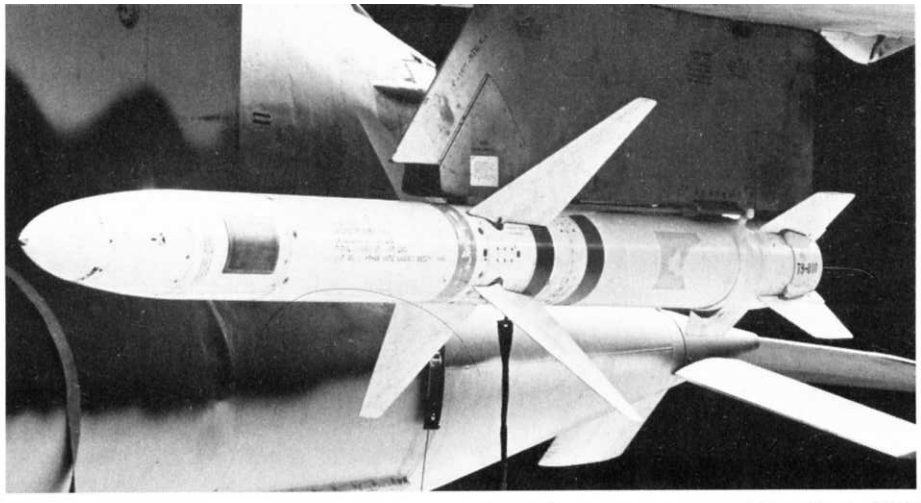
"Lead Zeppelin" was *F-105D* 59-1743, flown by Lt. Glenn Cloes with the 355th TFW, from Takhli in August 1970. Markings colors same as "High Stepper". Zeppelin appears to be a light green, with two inverted "V's". (Don Jay via Lars Soldeus)

F-105D of the 355th TFW formates on "F" of the same unit, November 1969 over Southeast Asia. Note camouflaged centerline tank on "D". (USAF)

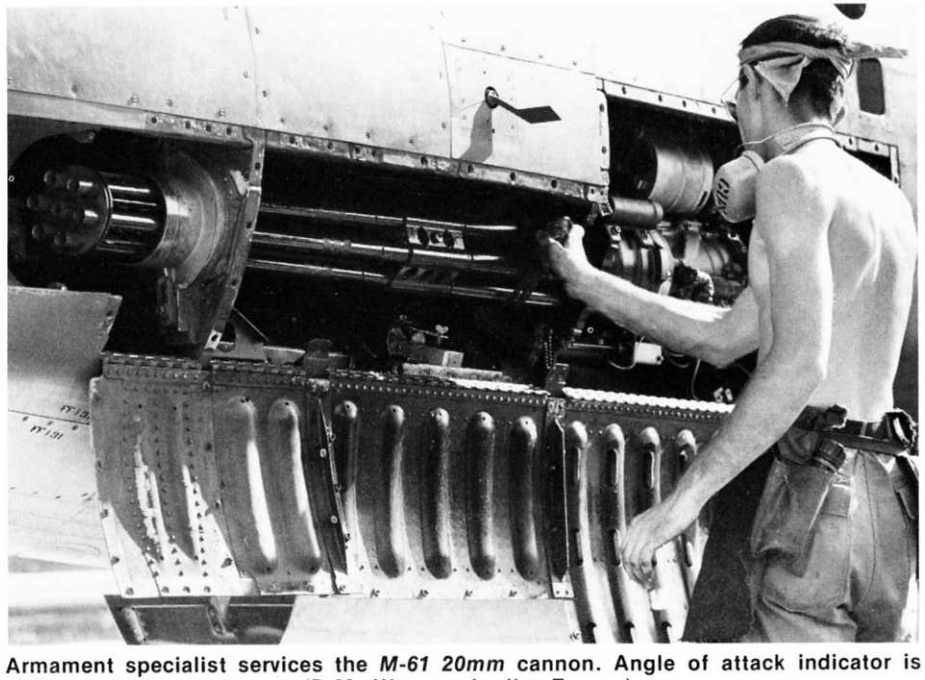
"Rosa L", of the 44th TFS, and *"Honey"* of the 333rd TFS (both 355th TFW) formate on a tanker enroute to targets in Laos, May 1970. Canopy frame and name background on "Rosa" are black, while canopy frames on "Honey" are white, name background red. Black area directly under cockpit is the AN/APN-131 Doppler antenna. (USAF)



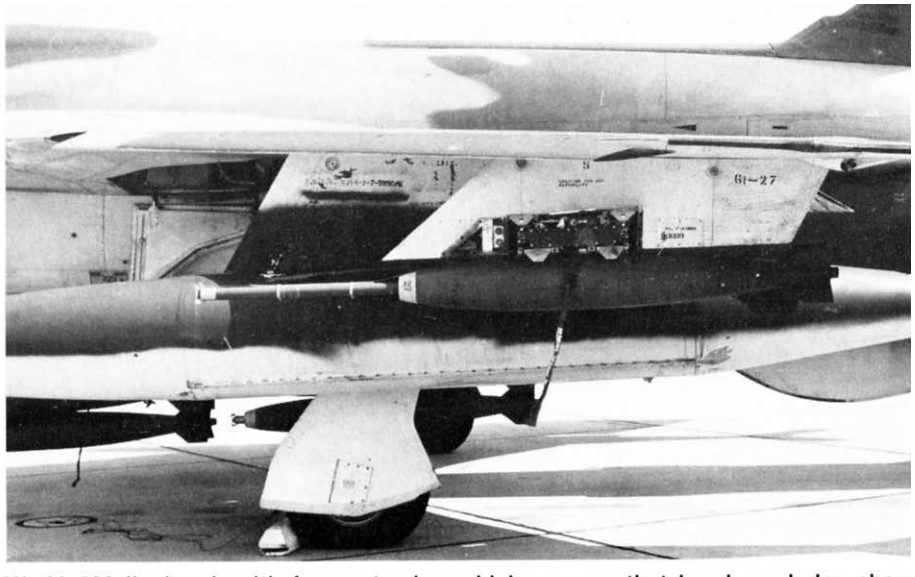
"Big Sal" was flown by Captain John Hoffman, Crew Chief Sgt. Mike Nadworny. 44th TFS, Takhli RTAB, 1969. (USAF)



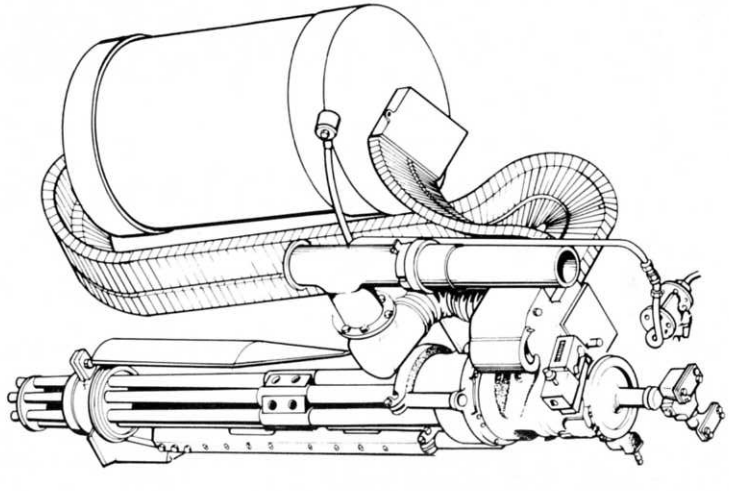
AGM-45 "Shrike" anti-radiation missile was the primary weapon used to attack SAM sites. (D.M. Weaver via Jim Farmer)



Armament specialist services the *M-61 20mm* cannon. Angle of attack indicator is visible just above cannon. (D.M. Weaver via Jim Farmer)

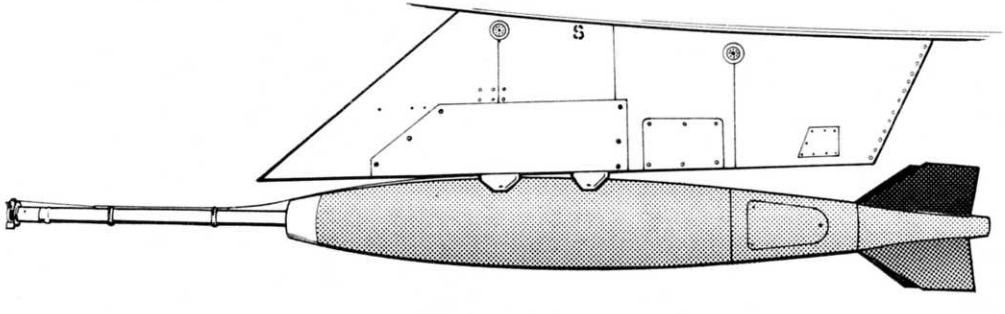


Mk 82 500 lb. bomb with fuse extender, which ensures that bomb explodes above ground, giving maximum anti-personnel shrapnel effect. (D.M. Weaver via Jim Farmer)

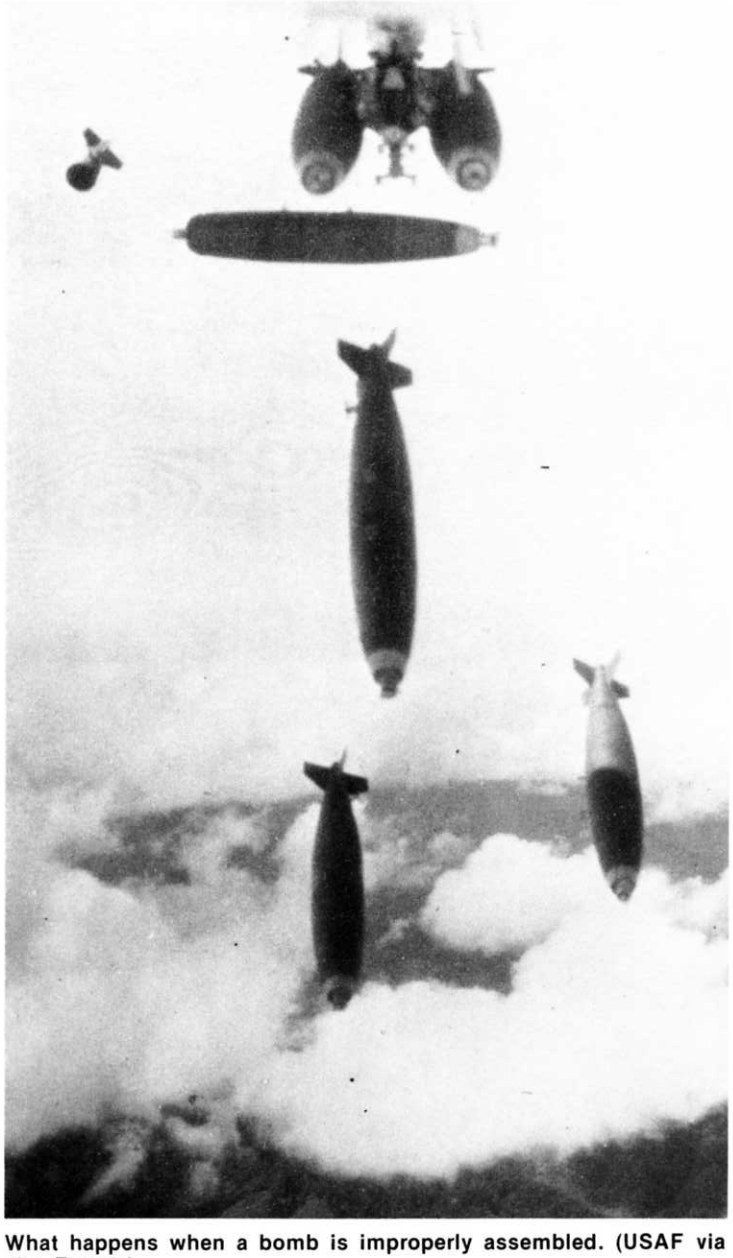


M-61 20mm Gun

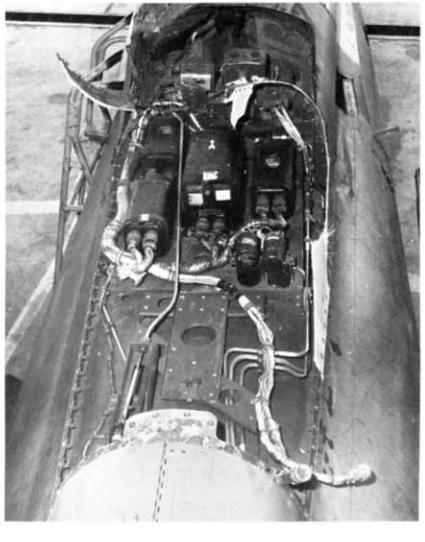
Loading Mk 82's on centerline MER. (D.M. Weaver via Jim Farmer)



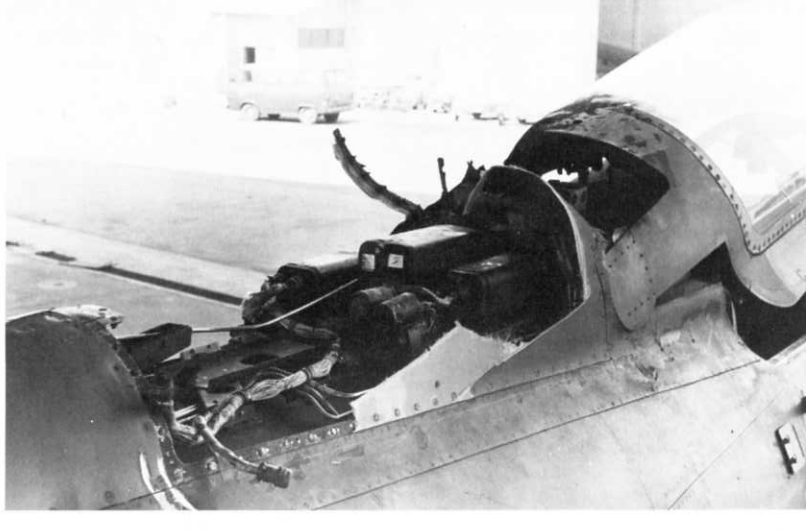
Mk 82 Bomb with fuse extender



What happens when a bomb is improperly assembled. (USAF via Jim Farmer)



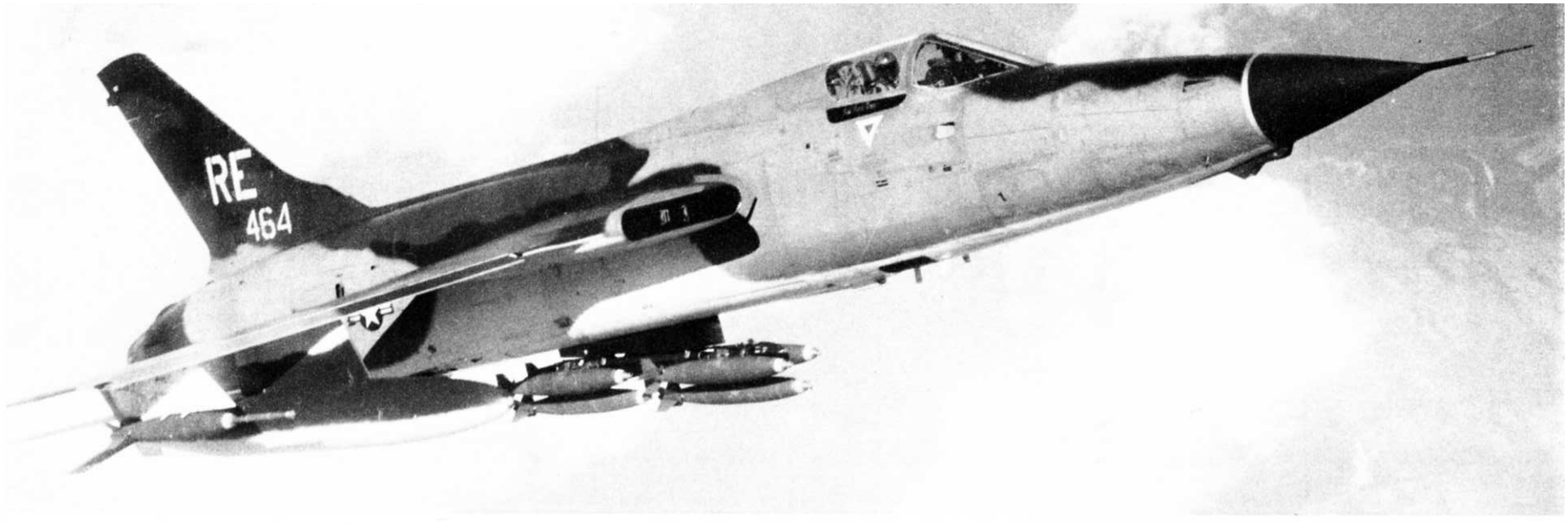
Typical Headgear



"Quantum Mechanic" F-105D-10-RE 60-0488 was flown by Lt. Dennis Weaver with 44th TFS in 1970. Names are silver on black background. Results of enemy 37mm AA hit on Thud Weaver was flying are shown in photos at left and right. Though shrapnel cracked his helmet, Weaver escaped unscathed. (USAF via Jim Farmer)

"Good Vibrations" was flown by Capt. Pete Brakeley with the 44th TFS in 1970. Canopy frame and name background are black. Brakeley's name in silver, "vibes" in red, with silver edging. Vampire on intake also in silver. Presidential Unit Citation and Air Force outstanding unit citation are left over from 469th TFS, which formerly flew this Thud. (D.M. Weaver via Jim Farmer)

Thuds with diverse ordnance loads. 498 carries 3,000 lb. bombs, used against "hard" targets, while 344 carries cluster bomb units and Mk 81's for use against personnel. Both assigned to 355th TFW at Takhli in 1970. (D.M. Weaver via Jim Farmer)

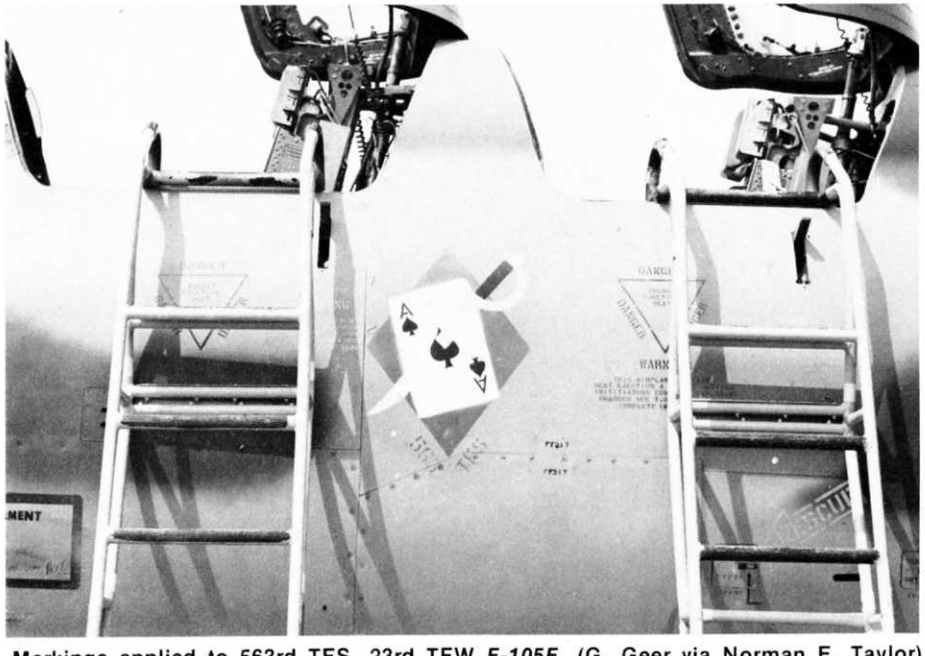


F-105D-10-RE of the 44th TFS photographed during a strike against the Ho Chi Mihn trail in 1970. (USAF)

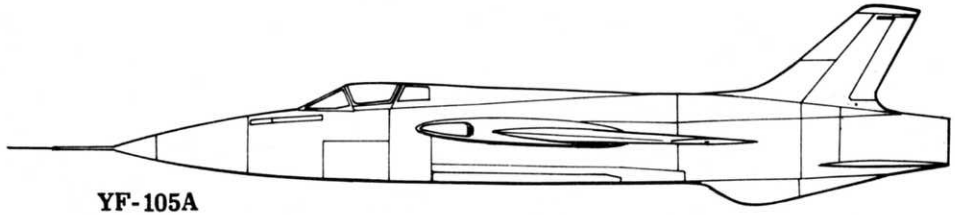
"Bachelor II" taxies out for a mission against the NVA in 1970. Markings on ventral fin and starboard wing tank applied by ground personnel as a souvenier of a landing at another base. (D.M. Weaver via Jim Farmer)

60-0464 prior to application of unit markings in February 1970. It carries Bullpup missiles and 650 gallon centerline fuel tank. (USAF)

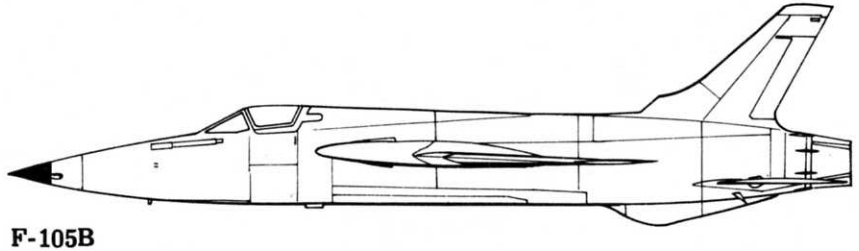
Close-up of 390 gallon bomb bay fuel tank carried by all Thuds. (Peter B. Lewis via Lars Soldeus)



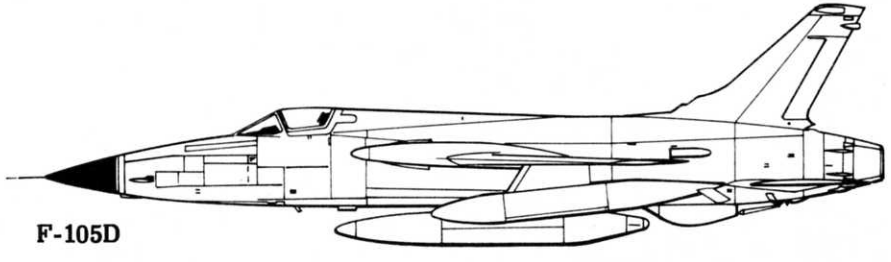
Markings applied to 563rd TFS, 23rd TFW *F-105F*. (G. Geer via Norman E. Taylor)



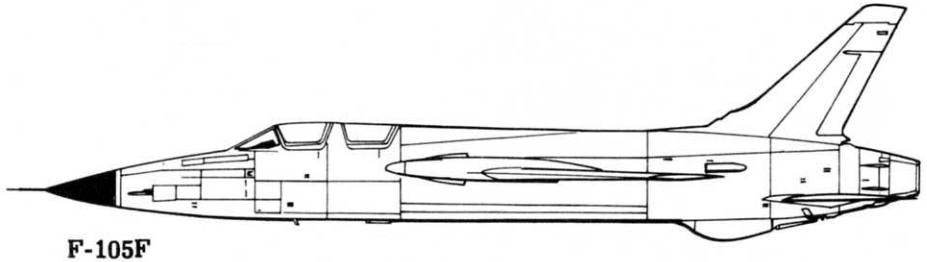
YF-105A



F-105B



F-105D

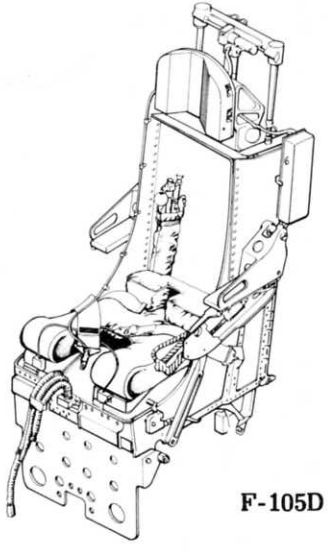


F-105F

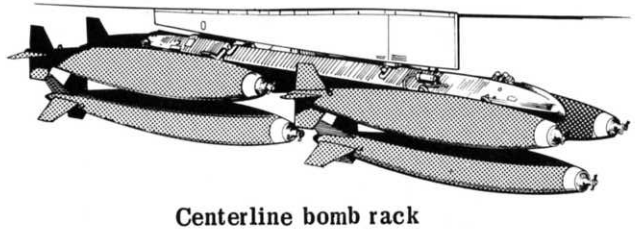
THUNDERCHIEF Development

F-105B-20-RE, 57-5833 of the 466th TFS, 508th TFG (Air Force Reserve) based at Hill AFB, Utah, photographed at Kelly AFB, Texas, February, 1973. (Norman E. Taylor)

Pair of *F-105B's* in formation takeoff from Hill AFB. (MSgt Ben Knowles)



F-105D Seat

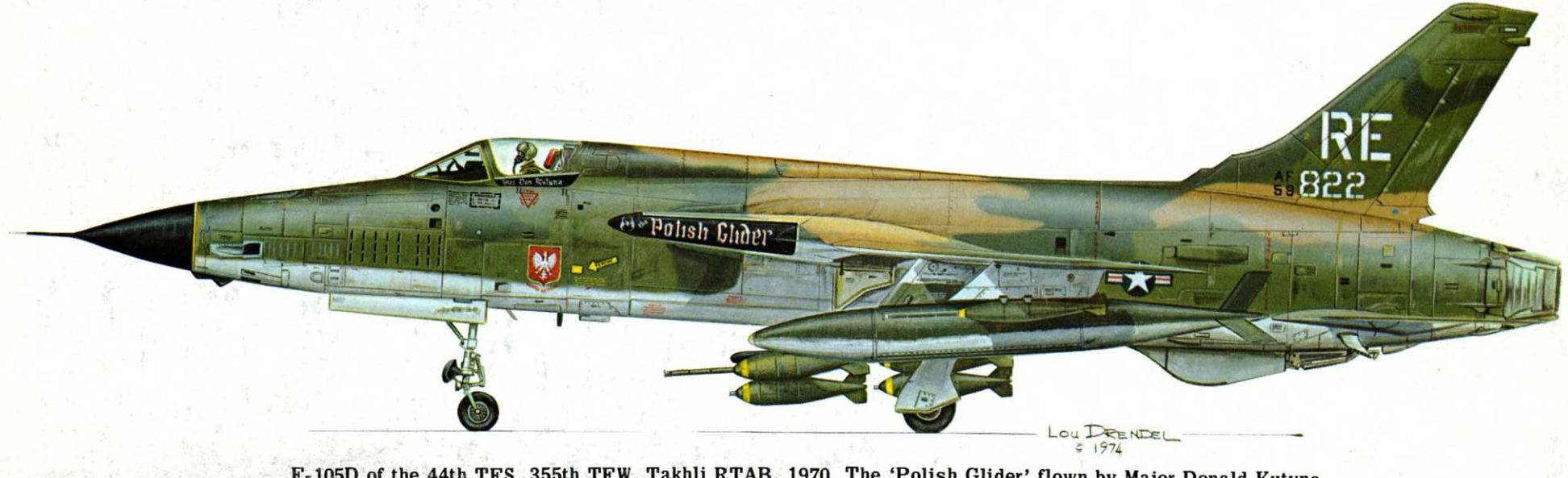


Centerline bomb rack

F-105D-10-RE of the 563rd TFS, 23rd TFW photographed at Kelly AFB, May, 1972. (above) (Norman E. Taylor) *F-105D* of the same unit photographed at Andrews AFB, also in May of 1972. (S.H. Miller via Lars Soldeus) This is the final growth version of the Thud, and features the enlarged saddleback which houses the *"Thunderstick II"* fire control system, T-stick II improves bombing accuracy up to seven times that of the conventional Thud capability, both in blind and low level modes, through the use of Doppler and Loran navigation devices. Air Force retrofitted 30 of the standard "D" models with T-stick II.

ME

F-105G of the 17th WWS Korat RTAB, 1972. Christened 'Muttley the Flying Dog', Shown armed with Shrike and Standard ARM missles.



F-105D of the 44th TFS, 355th TFW, Takhli RTAB, 1970. The 'Polish Glider' flown by Major Donald Kutyna.

This is the back cover of the book